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Croplife

PUBLISHED
EVERY
MONDAY

WEEKLY NEWSPAPER FOR THE FARM CHEMICAL MANUFACTURER, FORMULATOR AND DEALER

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No. 6

1955 Corn Acreage Allotment Set at 49,842,697 Acres

Quota for 21-State Commercial Area 8% Over Year Ago

WASHINGTON—The U.S. Department of Agriculture Jan. 31 announced an allotment of 49,842,697 acres for the 1955 corn crop in the 305-county commercial corn-producing area in 21 states.

The 1954-crop corn allotment was 46,995,504 acres in the 22-state and 34-county commercial area last year.

For a list of the counties in the 1955 commercial corn area, see page 7 of the Nov. 22 issue of Croplife.

Taking into consideration the smaller area included in the commercial area this year, the increase for the 1955 area will average about 8% over 1954.

The extent of the adjustment for individual counties and farms will vary from this average because of acreage trends, crop-rotations and other factors. The allotment for 1955 compares with 1954 corn plantings in the 1955 commercial area of approximately 55 million acres.

The acreage allotment for the commercial corn-producing area is determined by a formula designed to provide a "normal supply" of corn in the marketing year covered by the allotment. This formula indicates the need for a production of about 2.2

(Continued on page 21)

Tri-State Plant Has Formal Opening

SPRINGDALE, ARK. — Formal opening ceremonies for the new Tri-State Chemical Co. fertilizer plant were held here recently. The open house program included a welcome address by Frank Sizemore, Tri-State manager.

Fertilizer Role in Georgia Livestock Industry Praised

ATHENS, GA.—Georgia fertilizer dealers and representatives were told here recently that better fertilizer usage on the part of farmers is the key to better crop production at lower production costs.

At the same time they were praised for having reduced fertilizer grades in Georgia from more than 40 to 11 which are recommended by the state's agricultural extension service as suitable for the production of all crops in the state.

The words of praise and advice came from W. A. Sutton, state extension director, who said a good example of what fertilizer can do to improve production can be found in the records of crop production contest winners. Mr. Sutton spoke at the

Balance of Supply-Demand, Greater Fall Use Seen in Survey

Standard, Sinclair Form Anhydrous Ammonia Company

CHICAGO—Organization of Calumet Nitrogen Products Co., a new company that will build an ammonia plant at Hammond, Ind., was announced Jan. 31 by Standard Oil Co. (Indiana) and Sinclair Refining Co.

J. H. Forrester, manager of Standard Oil's research department, has been elected president of Calumet. E. W. Griscom, manager of Sinclair's East Chicago refinery, is vice president. Other directors include J. A. Scott and O. P. Thomas of Sinclair, and W. A. Culin, J. C. Ducommun and C. J. Struble of Standard.

Calumet will construct a 300-tonnes-a-day anhydrous ammonia plant which will be capable of converting a portion of the ammonia to nitrogen solutions.

Construction is expected to get under way in April. Completion and initial operations are scheduled for May in 1956.

Products of the plant will be marketed chiefly in the Midwest area.

Plans Announced For Third California Fertilizer Conference

SAN MARINO, CAL. — The Soil Improvement Committee of the California Fertilizer Assn. will hold the third annual California Fertilizer Conference on the campus of the University of California, College of Agriculture, at Davis, Cal., April 26.

third annual meeting of the Georgia Plant Food Educational Society at the University of Georgia here Jan. 18.

He praised the fertilizer representatives for what he termed a vital role in improving livestock production in the state. He said that the increase of permanent pastures in Georgia from 800,000 acres 25 years ago to 3,000,000 acres today was due in a large part to fertilizer and the men who are responsible for getting it to the farmer.

Harold Dinges, assistant sales manager of Spencer Chemical Co., said there is a great opportunity in get-

(Continued on page 8)

A number of important observations was noted in the answers given by a broad cross-section of the fertilizer industry to a questionnaire sent out by Croplife recently.

Opinions regarding the general supply outlook for the year indicated that demand and supply should be in approximate balance. The fall fertilization program is shown to be making progress in some parts of the

U.S. Firm to Build \$25 Million Urea Plant in Korea

NEW YORK—McGraw-Hydrocarbon, a joint venture of F. H. McGraw & Co., engineer and constructor of Hartford, Conn. and Hydrocarbon Research, Inc., New York City, has been advised by the Korean Embassy that it has been selected to negotiate a contract to construct a urea fertilizer plant for the Republic of Korea. The plant will cost approximately \$25 million.

The new fertilizer facility will have an annual capacity of 80,000 tons and will supply nearly one third of the needs of Korea, according to the firm. The plant is being financed by the Foreign Operations Administration of the U.S.

According to Clifford S. Strike, McGraw president, and P. C. Keith, president of Hydrocarbon, preliminary engineering and survey work will get underway immediately, and estimated time for the plant's completion is 30 months.

It is expected that top supervisory and administrative personnel for construction of the large plant will be recruited in the U.S. but McGraw-Hydrocarbon officials state that they will utilize Korean technical assistance and building forces inasmuch as it is possible.

New Hampshire House Passes Control Measure

CONCORD, N.H. — New Hampshire's House of Representatives passed and sent to the Senate Jan. 26 a bill to regulate the sale and distribution of mixed fertilizers and fertilizer material in the state. The measure is listed as House Bill 73.

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country and nearly all respondents show concern over the storage and shipping bottlenecks experienced each spring. Because of this condition, some respondents predicted spot shortages may develop at the peak of the shipping season.

The questionnaire, sent largely to fertilizer mixers in all parts of the country, indicated that as a whole, supplies should be adequate. Understandable differences of opinion are noted from fertilizer men in different sections of the country, but there is a strong unity in the way most current problems of the industry are regarded.

In addition to queries about the supply-demand situation, other questions dealt with whether production plans are being adjusted to correspond to new conditions resulting from acreage reductions and whether current Federal farm policies, particularly those having to do with price supports, have a noticeable effect on sales. Another question asked whether the firm expected to keep its plant (or plants) operating at full capacity this season.

How about the success of efforts to put across fall fertilization? Have such programs been successful in your locality? This was another query which brought forth an interesting array of replies.

Since practically everyone in the trade is conjecturing about whether many dry fertilizer mixers intend to handle either anhydrous ammonia or nitrogen solutions, we asked this question. The answers indicated that many are consider-

(Continued on page 24)

Chemco of Iowa Joins Chemical Enterprises Group

NEW YORK—Chemco of Iowa, agricultural fertilizer concern with twelve affiliate companies located in western Iowa, has joined Chemical Enterprises, Inc., it was announced Jan. 28 by Daniel B. Curril, Jr., president.

The new acquisition which has headquarters in Audubon, Iowa, raises the total of such distributing companies affiliated with Chemical Enterprises to 50 with approximately 300 distribution points.

Chemco, which was acquired through an exchange of stock, will continue under the leadership of Tully W. Talbot as president and general manager and will operate with the same board of directors, officers and employees. Mr. Talbot is first vice president of the Agricultural Ammonia Institute.

Chemco has 21 distribution points and, in its last season, serviced almost 175,000 acres. It has about a half million gallon storage capacity and plans to put in about 250,000 gallons additional storage capacity this year.

Wm. B. Tilghman Co. Dedicates New Fertilizer Plant With Open House

POCOMOKE CITY, MD. — The new Wm. B. Tilghman Co. fertilizer plant was dedicated here Jan. 28.

Several hundred persons attended as guests of the firm for a tour of inspection conducted by Col. Wm. B. Tilghman, Jr., Ralph A. Ross, John L. Morris, F. Nash Strudwick and Ted Smith, company officials.

Following the inspection of plant facilities, guests were served a barbecued chicken dinner, complete with all the trimmings and refreshments.

The plant replaces one razed in a fire in November, 1953. It is 95 ft. wide and 210 ft. long, with a gallery for conveyors above.

Walls of the building are of reinforced concrete and the roof of corrugated asbestos around a structural steel frame. Bulk raw materials are unloaded at each end of the plant—

from boats on the north and from railway cars at the southern end.

A bucket elevator and belt conveyor deliver to various bins. The weighed batch discharges by gravity to the first elevator of a one-ton mixing unit.

Here, blending and ammoniation are carried out, using nitrogen solutions. The mixed fertilizer is elevated by a second bucket elevator and carried to the bins by belt conveyors.

The bagging system is for use in filling either 80-lb. paper or 167-lb. burlap bags. The bagged fertilizer goes on a conveyor directly to waiting delivery trucks.

The plant was designed by F. Nash Strudwick, staff engineer.

Officers of the Wm. B. Tilghman Co. are: Wm. B. Tilghman, Jr., president; Louise T. Lambert, vice president; Ralph A. Ross, vice president

and manager, Pocomoke plant; John L. Morris, secretary-treasurer; F. Nash Strudwick, assistant secretary-treasurer and staff engineer, and Edward H. Smith, sales manager.

ASC Appointments

WASHINGTON — Ezra Taft Benson, secretary of agriculture, recently announced appointments to state Agricultural Stabilization and Conservation committees. They include:

Hugh E. Evans of Brattleboro, Vt., as chairman and Benjamin Frank Myott of Enosberg Falls, Vt., as a member of the Vermont committee; John P. Dale of Menomonie, Wis., as a member of the Wisconsin committee, and Harold Ball of Menan, Idaho, as a member of the Idaho committee.

CROP GROUP TO MEET

RICHMOND, VA. — The annual membership meeting of the Virginia Crop Improvement Assn. has been scheduled for Feb. 18 in Richmond.

Hercules Powder 1954 Net Income Rises, Sales Dip

WILMINGTON, DEL. — Hercules Powder Co. in its 1954 report to stockholders showed a 21% increase in net income with a decline of 1% in sales.

Helped by the elimination of excess profits tax, net income after all charges was \$14,140,070, equal to \$5.10 a share of common stock.

This compares with net income of \$11,680,854 in 1953, equal to \$4.10 a share.

Net sales and operating revenue in 1954 amounted to \$187,547,560, compared with \$190,202,417 in the preceding year. Export demand in particular was strong during 1954 and accounted for approximately 18% of total sales as against 10% in 1953.

New plant expenditures reached all-time high of \$21,207,000, almost double the expenditures for each of the two previous years, Albert Forster, president, said in his letter to stockholders.

New plant expenditures in 1955, although rising to an all-time high for the company, were accomplished without resort to outside financing, the president said.

Among major expenditures was that for increased capacity for anhydrous ammonia.

Research and development expenditures for 1955 will be at substantially the same level as in 1954, when they amounted to \$7,578,000.

Mr. Forster said that the company's diversification of products continued, with no one of its products accounting for more than 15% of the company's sales. The report showed that sales to the protective coatings industry took 18% of the total, paper chemicals 12%, mining and quarrying 11%, synthetic fibers 9%, plastics and identifiable military uses each 8%, agricultural chemicals 7% and petroleum 5%.

"With the purchase and activation of Missouri Ordnance Works, 40,000 tons per year of anhydrous ammonia were added to the increased capacity previously achieved late in 1953 at Hercules, Cal., giving us a total of 90,000 tons," Mr. Forster said. "In addition, the company has a one-half interest in Ketona Chemical Corp. whose plant near Birmingham, Ala., when completed the latter part of this year, will have a capacity of 45,000 tons."

"While 1954 was a year of great activity in construction, the improvement and consolidation of your company's regular operations were not neglected. Employee morale is high, plants are in excellent physical condition, sales fields are well covered and Hercules is in a good position to cope with 1955—the prospects for which, at this time, are favorable."

Hough Names Two New Vice Presidents

LIBERTYVILLE, ILL.—The Frank G. Hough Co., Libertyville, Ill., manufacturer of "Payloader" tractor shovels and towing tractors, has announced the promotion of G. A. Gilbertson and R. L. Beyerstedt to executive vice presidents.

Mr. Gilbertson, formerly vice president in charge of sales, advertising and service, is now executive vice president and general manager.

Mr. Beyerstedt, formerly vice president and chief engineer, is now executive vice president in charge of engineering and product development. In announcing these changes, Frank G. Hough pointed out that he has no intention of retiring and will continue to be active as president.

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Record Attendance Indicated for Joint Agronomist Meeting

CHICAGO—Advance reservations indicate a record attendance at the forthcoming 7th annual meeting of Midwestern Agronomists and Fertilizer Industry representatives in Chicago, Feb. 17-18, according to Zenas H. Beers, executive secretary of the Middle West Soil Improvement Committee, sponsor of the meeting.

The meeting will be held in the Red Lacquer Room of the Palmer House in Chicago.

Attending will be research and extension agronomists from 13 Midwestern agricultural colleges and key personnel of fertilizer companies in the Corn Belt and neighboring states.

The two-day meeting will focus particular attention on methods of cutting the cost of producing corn, wheat and small grains and increasing the per-acre yields.

Agronomists will present research reports summarizing the latest information on the use of fertilizer in promoting more efficient crop production, more efficient tillage methods, time and placement of fertilizer applications and better management practices for corn, legume-grass crops and for soft winter wheat, hard winter wheat and spring wheat.

H. S. Vorhes, president of the Middle West Soil Improvement Committee will officially open the meeting at 1 p.m. Feb. 17, with a welcome to the soils men, fertilizer industry representatives and visitors.

Dr. Floyd W. Smith, Kansas State College, will then take over the gavel as chairman for the sessions which will continue through Thursday afternoon and conclude at noon Feb. 18. Since their inception, these February joint meetings have grown steadily in importance, interest and attendance, Mr. Beers pointed out.

Midwestern agronomists report that these meetings "have made it possible for both the soils specialists and the fertilizer men to understand better the various problems involved in fertilizer manufacture and its use by farmers."

Federal Action Urged on Control of Mexican Fruit Fly

SACRAMENTO—California's congressional delegation has been asked by the state to speed up federal action to cope with the Mexican fruit fly problem.

The appeal came from the Joint Interim Committee on Agricultural and Livestock Problems, headed by Sen. Paul Byrne of Butte County.

Mr. Byrne said the state has put up adequate funds for control work but the federal research program apparently has "bogged down."

The interim committee chairman said it would be foolish to spend another \$10,000 for climate chambers, used in research on the fly, if the chambers will gather dust in storage.

The committee asked the delegation to persuade the U.S. Department of Agriculture to put into operation climate chambers now in storage in Brownsville, Texas.

Gov. Goodwin J. Knight in his inaugural address to the California Legislature also recognized the threat to California agriculture by the Mexican fruit fly. He warned the legislature to be prepared to authorize control programs for Mexican fruit fly as well as the Khapra beetle.

PLOWVILLE DATES SET

ST. PAUL—Plowville '55, Minnesota's annual state soil conservation day, will be held on the Trosvik Brothers farms four miles north of Rothsay, Sept. 16-17.

Olin Mathieson Makes Grant for Study of Ammonium Phosphates

FAYETTEVILLE, ARK.—The University of Arkansas' Agricultural Experiment Station has received a grant of \$5,000 from the Olin Mathieson Chemical Corp. to undertake a study of the ammonium phosphate types of fertilizers. In making the announcement, Lippert S. Ellis, dean and director of the College of Agriculture and Home Economics, pointed out that it is for the 1955 calendar year.

The grant-in-aid will be used to conduct laboratory, greenhouse and field experiments relating to the availability of different sources of phosphorus to plant growth, particularly phosphate fertilizers containing ammonium in comparison with superphosphate.

E. O. McLean and C. L. Garey of the agronomy staff will direct the research studies. Dr. McLean will supervise the laboratory and greenhouse work, and Dr. Garey will conduct field experiments in connection

with the outlying fertilizer tests that are conducted by the Experiment Station's Soil Testing and Research Laboratory. Graduate students will assist with the expanded fertilizer research.

Transmission Error

In a report of the recent Northeastern Weed Control Conference in New York, the following statement appeared on page 19 of the Jan. 24 Croplife: "Alfalfa growth was reported not affected and yields not reduced by application of $\frac{1}{4}$ to $\frac{1}{2}$ lb. of 2,4-D." Because of a transmission error, this reference to 2,4-D is incorrect. It should have been 3,4-D.

AT GENEVA CONFERENCE

ST. LOUIS—E. W. Dwyer, director of Monsanto Chemical Co.'s Personnel Relations Department, is representing the American chemical industry at the fourth session of the Chemical Industry Committee of the International Labor Organization in Geneva, Switzerland, Feb. 7-19.

Bollworm Quarantine Asked in Arkansas

LITTLE ROCK—The House of Representatives of the Arkansas legislature has adopted a resolution urging that the entire state be placed under quarantine to regulate the menace of the pink bollworm.

The measure declared that the cotton pest "is endangering the cotton industry throughout the state." The resolution noted that the pink bollworm was first detected in Arkansas about two years ago and that it has spread so rapidly that 20 of the state's 75 counties are now under quarantine.

To Head Portland Office

PORTLAND, ORE.—Paul J. Pernice has been named to head the local office of General Dyestuff Co. and Antara Chemicals, sales divisions of General Aniline & Film Corp., New York. He will cover the Oregon, Washington and Idaho territory. Mr. Pernice joined General Dyestuff in 1948.

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INSECT AND PLANT DISEASE NOTES

Wisconsin Counts Its Corn Borers

MADISON, WIS.—A survey by the Wisconsin Department of Agriculture indicates that the state entered the winter with about 28 European corn borers per 100 plants; approximately the same borer population as was found a year earlier.

A comparison of numbers of borers found per 100 corn plants for the past several years is as follows:

168 borers per 100 plants, 1949
52 borers per 100 plants, 1950
43 borers per 100 plants, 1951
37 borers per 100 plants, 1952
27 borers per 100 plants, 1953
28 borers per 100 plants, 1954

Wisconsin led the corn-belt states in yield per acre for the second

consecutive year, according to the Wisconsin Crop Reporting Service. Wisconsin averaged 60 bu. per acre; Ohio 55; Illinois 54; Iowa 53; Indiana 51.5; and Minnesota 49.5. The state of Washington with only 10,000 irrigated acres of corn averaged 61 bu. per acre and was the only state that led Wisconsin in yield per acre.

In 1954 Wisconsin farmers planted a total of 2,733,000 acres of corn and harvested 2,686,000 acres; 1,606,000 acres were grown for grain which yielded 96,360,000 bu.; 1,053,000 acres were grown for ensilage and yielded 10,003,500 T. or 9.5 T. per acre; 27,000 acres of corn were grown for forage.

Using \$6.10 per ton, the value of corn ensilage would total \$61,021,350. At \$1.50 per bu., the total value of

corn grain would amount to \$144,540,000.

Borer loss figured at 3% per borer per plant would be only 0.8% loss (3% x 28 borers per 100 plants).

The combined value from ensilage and corn grain would be \$205,561,350 and when multiplied by 0.8% borer loss would give a total borer loss of \$1,644,500.

In the northeastern part of the state where the borer population was higher, the borer caused a considerable amount of stalk breaking over in many fields.

No one variety of corn seemed to be broken over more by borers than any other variety. It was noted that where there were high populations of corn plants to the acre and where corn stalks were of smaller diameters, borers caused more breaking over. Stalk rot and heavy winds also caused corn stalks to be broken over in addition to that caused by the

borer and some fields were laid low.

Aided by favorable winds corn borer moths can be expected to be blown in from heavily infested areas of adjoining states, a factor which cannot be accurately predicted.

Borer populations were determined by making nearly 50 random stops in corn fields in each survey district.

Report on Florida's Insect Situation

GAINESVILLE, FLA.—Insect activities in Florida continue, with number of pests being found in different localities. Wireworm (*Macrourus* sp.) averaging one larva per square yard was collected from St. Augustine grass in Broward county. No apparent damage was indicated.

Red-headed pine sawfly (*Neodiprion lecontei* (Fitch)) in the larva stage was feeding on needles of longleaf pine seedlings at Orlando.

Leafhopper (*Deltocephalus flavocosta* (Stål)) in the nymphal and adult stages, averaging 4 per sweep in 35 sweeps, was collected from St. Augustine grass in the Lakeland city park.—H. A. Denmark.

Pennsalt Acquires Major Interest in Index Chemical Co.

PHILADELPHIA — The Pennsylvania Salt Mfg. Co. has acquired a major interest in the Index Chemical Co. of Houston, Texas, George B. Beitzel, Pennsalt president, has announced.

Index, first in the U.S. to produce ethyl and methyl mercaptans synthetically for commercial sale, also produces dimethyl and diethyl sulfides. These organic sulfur compounds are used principally as gas odorants and as intermediates for agricultural chemicals, animal feed supplements, pharmaceuticals and solvents.

Index activities will be integrated with the production and sales departments of Sharples Chemical Inc., a Pennsalt subsidiary and producer of related synthetic organic sulfur compounds.

Joining John T. Files and C. A. Dickey of Houston on the Index board are L. H. Clark, H. F. Bjork, D. H. I. Cramer and R. W. Sloan of Sharples; and G. T. Collins, Pennsalt. Company officers are Sharples' chief executive L. H. Clark, president; C. A. Dickey and H. F. Bjork, vice presidents; J. F. Towle, secretary and treasurer, and T. B. Hudson, assistant secretary and treasurer.

W. C. Creel Added to Safety Letter Staff

ITHACA, N.Y.—W. C. Creel, safety director of the North Carolina State Department of Labor, has been appointed to the staff of the Fertilizer Section's "Safety News Letter." The monthly paper, sent to every fertilizer plant in the U.S., is edited by Thomas J. Clarke, GLF Soil-Building Service, Ithaca. He and Mr. Creel will be responsible for its production during 1955.

According to editor Clarke, Mr. Creel will present a formal safety program similar to the one used in the fertilizer industry in North Carolina with the resultant 40% reduction in accident frequency in an 18-month period. This information will be given in monthly installments during the year.

The fertilizer section of the National Safety Council is currently conducting a membership campaign with the goal of gaining a much larger representation of the total number of plants in the country. Emphasis is being placed on the necessity of small plants joining in the safety program.

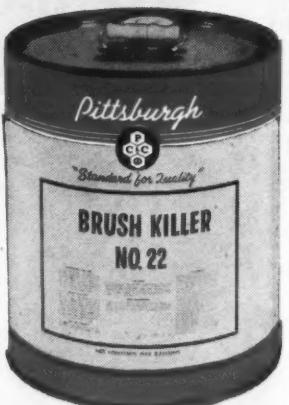
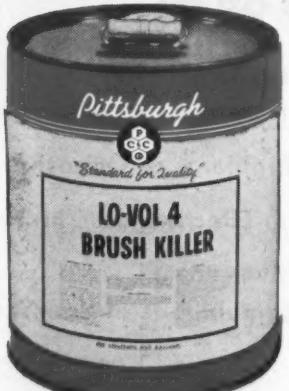
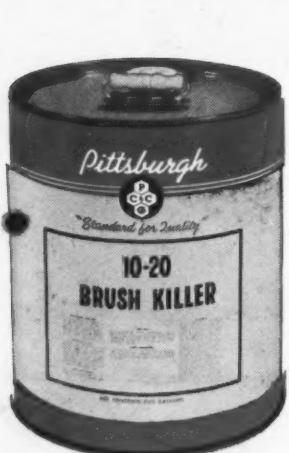


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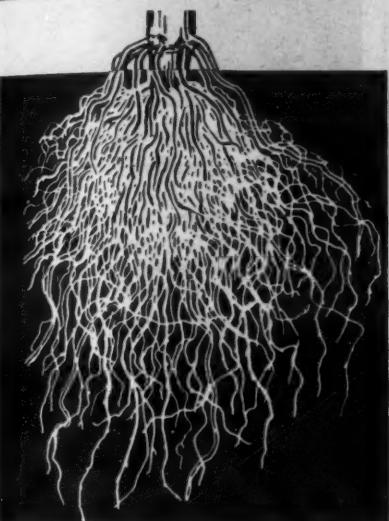
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16 STATES REPRESENTED

Geigy Chemical Corp. Holds Open House at \$500,000 Pesticide Plant in Des Moines

By LAWRENCE A. LONG
and W. E. LINGREN
Croplife Editorial Staff

DES MOINES — Geigy Chemical Corp. has opened its new \$500,000 processing plant here for production of both insecticides and weed killers. Several hundred visitors were shown through the new plant Jan. 27 which the company had set aside as open house. A snow storm and 13-below zero cold failed to reduce the number of guests in attendance, or to lessen their interest in touring the new facilities.



See "Corn's Hidden Enemies..."

a helpful film on
soil insect control

An educational film depicting the destruction of corn by rootworms and other soil insects and how they can be controlled.

It shows an actual field operation at the Howard Waters Farm, Danville, Iowa.

Available for showing, from our film library . . . to Vo-Ag Teachers, County Agents, Formulators and Dealers. Write for the loan of a free print (and specify an alternate date please!) Shell Film Library, 624 South Michigan Boulevard, Chicago 5, Illinois.

SHELL CHEMICAL CORPORATION
Agricultural Chemicals Division
Manufacturers of
aldrin

some 40 miles west of Burlington.

Geigy Chemical Corp. is a subsidiary of the Swiss firm of J. R. Geigy, S. A., a company formed in 1764 at Basle, Switzerland, by John Rudolph Geigy. He began his business selling drugs, spices and handling certain woods and barks of trees used for the dyeing of silk, then an important material in that part of the world.

The company later became well known in the dye business and was

CROPLIFE, Feb. 7, 1955—5

marketing in many countries of the world. Its broad research activities led to Dr. Paul Mueller's discovery of DDT insecticides, a feat which earned him the Nobel Prize.

In the U.S., the Geigy Company dates back to the John J. Keller Co. which imported and sold the parent firm's products at the turn of the century. In 1903, the first American Geigy Company was incorporated.

1-12 gallon sizes

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HI-BAKE Linings

Continuous laboratory and applied research in the development and application of Hi-Bake Linings has established Vulcan leadership in this method of providing complete protection to a wide variety of products.

Vulcan has had years of experience with impervious coatings, and Vulcan Hi-Bake Linings have been thoroughly tested over long periods of time under a variety of adverse conditions. Perfect adherence, full surface coverage and exact film thickness are secured by scientific control instruments.

Hi-Bake Interior Linings are available in all sizes of pails and drums for Paints, Inks, Foods, Chemicals and other "hard-to-hold" products—liquid, semi-liquid or dry.

We shall be pleased to submit a container having a Hi-Bake Lining recommended for your specific problem. Write for sample and prices.

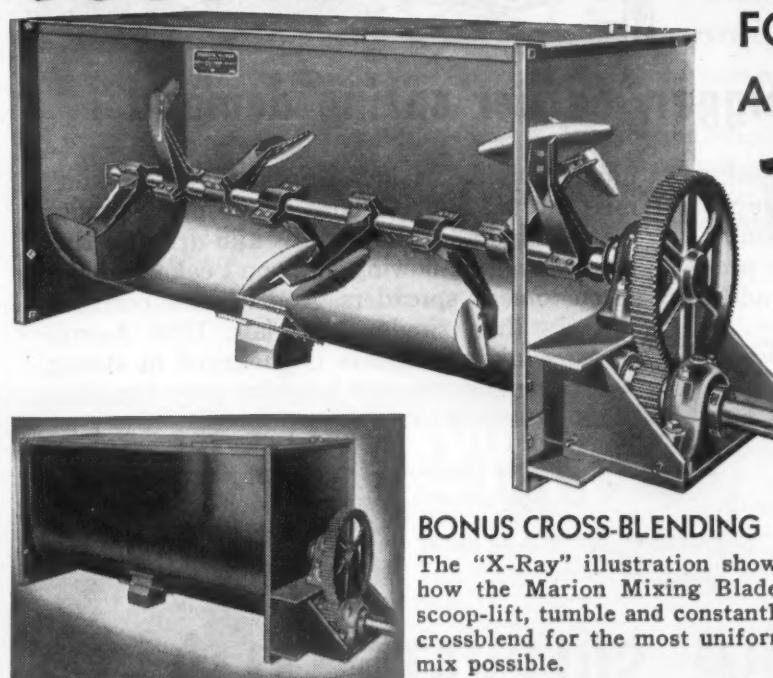
DRUM-TYPE CLOSED-HEAD CONTAINERS—Drum type containers are furnished in all practical sizes and with popular pouring nozzles and spouts. Ask for complete information.

Over 30 Years of Top Quality Containers
"It's Better to Ship in Steel!"

VULCAN STAMPING & MFG. CO.
Box 161, Bellwood, Illinois (suburb of Chicago)
In Toronto, Canada—Vulcan Containers Limited. Representatives in all Principal Cities.

DOUBLE PROFIT... in FERTILIZER MIXING!

FORMULATE YOUR OWN
AND SAVE with a...



BONUS CROSS-BLENDING

The "X-Ray" illustration shows how the Marion Mixing Blades scoop-lift, tumble and constantly crossblend for the most uniform mix possible.

UP TO 50% INCREASE IN FERTILIZER SALES PROFITS! With a low cost, dependable Marion Mixer, you can almost double your present Fertilizer profits. Case histories in our files prove it! Now you can custom mix any Fertilizer formula for any field requirement . . . produce an absolutely uniform formula that will pass the most rigid analysis. The simple but efficient design of the Marion Mixer with its exclusive mixing and blending action will turn out a consistent formula, batch after batch, no matter what the requirements. The MARION will mix any formula with absolute accuracy. Cylinder shell is $\frac{3}{4}$ steel for long life. Dodge-Timken roller bearings. Rugged construction. Cylinder shell also available in durable $\frac{5}{8}$ steel if desired.

THE MIXER THAT GUARANTEES UNIFORMITY!

RAPIDS MACHINERY COMPANY
MARION, IOWA

For Complete Information and Details, Write:
895 11th Street

REDUCTION IN VEGETABLE ACREAGE ASKED BY USDA

WASHINGTON — Acreage-marketing guides for 1955-crop summer and fall vegetables for fresh use, summer melons, vegetables for processing, sweet potatoes and late potatoes were issued Jan. 31 by the U.S. Department of Agriculture.

Reductions of 1% in total acreage for fresh summer vegetables, 1% for fresh fall vegetables, 12% for summer melons and 1% for vegetables for processing were recommended. The guide for sweet potatoes is a planted acreage equal to that in 1954. The planted acreage guide for late potatoes is 5.5% less than the acreage planted in 1954.

The guides are part of an annual series. Guides for winter and spring vegetables were announced by the department in August and November, 1954. (See page 2 of the Aug. 30 issue of Croplife and page 2 of the Nov. 29 issue.)

Issued seasonally prior to planting time the guides are designed to assist vegetable growers in planning production. Action by growers on the department's recommended acreages is voluntary.

In the aggregate, the 1955 guides

for 16 fresh summer vegetables total 494,490 acres to be available for harvest (compared with 499,470 acres for harvest in 1954); for 15 fall vegetables the guides total 269,500 acres to be available for harvest (compared with 271,600 acres in 1954); and for two summer melon crops the guides total 393,200 acres to be available for harvest (compared to 445,570 acres in 1954).

The guides for vegetables for processing and sweet potatoes are on a planted acreage basis. For nine vegetables for commercial processing the guides total 1,682,455 acres to be planted (compared to 1,699,130 acres planted in 1954), and for sweet potatoes the planted acreage guide is 354,000 acres (equal to the acreage planted in 1954).

The late crop potato acreage guide, by states, amounts to a national total of 1,023,500 acres (compared to 1,083,400 acres planted in 1954). With average yields, the probable production from the guide acreage would be 272 million bushels of potatoes. This would be about 5% less than production in 1954, but the supply

should be sufficient to meet all known requirements.

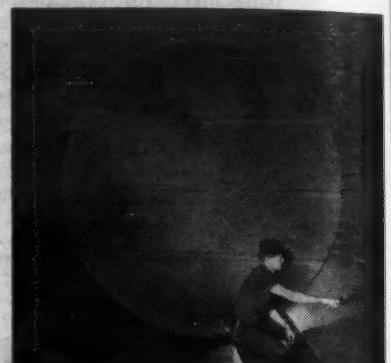
A more detailed report, "1955 Acreage-Marketing Guides, Summer and Fall Vegetables for Fresh Market, Summer Melons, Vegetables for Processing, Sweet Potatoes and Late Potatoes," will be available for distribution through the state agricultural extension services at an early date.

Joseph J. Burbage in Monsanto Research Post

ST. LOUIS—Dr. Joseph J. Burbage of Miamisburg, Ohio, has been appointed assistant director of the research department of Monsanto Chemical Co.'s Inorganic Chemicals Division, it was announced recently by E. G. Somogyi, division research director.

Mr. Burbage has been director of Mound Laboratory at Miamisburg which Monsanto operates for the Atomic Energy Commission. He will take up his new duties on March 1, making his headquarters at Everett, Mass., where he will assume administrative responsibility in the division's research activities.

Liquid Fertilizer TANKS



The Economical Answer to Fertilizer Handling Problems

Increased demand for liquid fertilizers means proper equipment for bulk handling if you and your dealers are going to meet competition and show a profit.

One kind of tank—the rubber-lined tank—has been proved most economical and dependable. Acme-Fisher has had long experience in this field, supplying leading chemical companies with standardized acid-handling equipment.

Write, wire or phone for quotation on your needs. We fabricate our own steel, save two profits on every job.

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USS Ammonium Sulphate

**makes satisfied,
repeat-order
customers**

-it's non-leaching

Nitrogen used for *early* spring application (and for fall and winter too) should be non-leaching Ammonia nitrogen. Then, when the heavy spring rains come, little or none is lost through leaching. Your customers will appreciate it and you'll build future demand for nitrogen if you sell non-leaching USS Ammonium Sulphate for direct nitrogen application. And be sure too that your mixed fertilizers derive a good portion of their nitrogen from USS Ammonium Sulphate.

Stock up NOW for bigger, earlier spring demand

All indications point to increased nitrogen sales this year . . . with the emphasis on *earlier* application this spring for earlier growth. Most states are pushing extensive pasture-improving programs that call for a lot more nitrogen. In addition, the efforts of agricultural authorities for increased usage of nitrogen are bearing fruit. Last year the sale of balanced ratio fertilizers—such as 10-10-10—showed greater percentage increases than other mixtures. The trend to nitrogen should be even stronger this year.

Order your supply of USS Ammonium Sulphate right away so that you won't miss out on any of those early spring profits. USS Ammonium Sulphate is kiln-dried so that it's always free-flowing . . . won't cake and clog in customers' spreaders. And it's less corrosive than similar materials. USS Ammonium Sulphate is packaged in strong, moistureproof bags for easy handling, safe storage.



SEE THE UNITED STATES STEEL HOUR. It's a full-hour TV program presented every other week by United States Steel. Consult your local newspaper for time and station.

We can help you solve your problems on—

- ★ Potential Sales
- ★ Market Trends
- ★ New Products
- ★ Distribution

Write for Free Booklet

Market Research Division, Doane Agricultural Service, Inc., Box 993, 5142 Delmar Blvd., St. Louis 8, Mo. (Telephone, FOREST 1-2800)

USS AMMONIUM SULPHATE

UNITED STATES STEEL



5-406A

BRADLEY & BAKER
FEED • FERTILIZER

**E. K. Hampson Retires
as Canadian Manager
for Potash Institute**

WASHINGTON—E. K. Hampson retired Jan. 1 from his position as Canadian manager for the American Potash Institute, which he had held since the Institute's formation in 1935.

Mr. Hampson's long career in agriculture started with his graduation with a B.S.A. degree from the University of Toronto in 1915. Following this he was an agricultural representative with the Ontario Department of Agriculture for four years and then professor of field husbandry and soils, Kemptville Agricultural School, for nine years. From 1928-35 he was Ontario Representative for N. V. Potash Export, M.

Mr. Hampson has served on many Provincial committees dealing with Canadian agriculture. He is a past president of the Agricultural Institute of Canada, a member of the Chemical Institute of Canada, the American Society of Agronomy, Soil Science Society of America, and the American Association for the Advancement of Science.

Mr. Hampson will continue to make his home in Hamilton, Ont. His successor in the management of the Institute's Canadian office is Dr. Roy P. Pennington, formerly connected with the Agronomy Department of Pennsylvania State University.

**New York ACS Section
Schedules Meeting**

NEW YORK—"Basic Considerations in Development of Agricultural Chemicals" will be discussed at the Feb. 11 meeting of the New York section of the American Chemical Society.

The meeting, to be held at the Carbide and Carbon Bldg. here, will take the form of a "symposium in miniature." Discussions will be based on investigations conducted by the Joyce Thompson Institute for Plant Research, Inc., Yonkers, N.Y.

Moderator will be Dr. George L. McNew, managing director of the institute. Dr. McNew will open the symposium with a discussion on "The Pesticide Market, Present and Future."

"Weed Control by Growth Regulating Chemicals" will be discussed by Dr. A. E. Hitchcock and P. W. Zimmerman. Regulation of plant growth and flowering will be the topic of Dr. J. Vlitos in a talk entitled "Plant Auxins in Regulation of Plant Growth and Flowering."

Interactions between fungicidal chemicals, fungus spores and host plants which have been studied for sulfur, ferric dimethyldithiocarbamate, 2-heptadecyl-2-imidazoline, mercury, silver and cerium will be covered in "Tracing the Mechanism of Action of Fungicides" by Dr. L. P. Miller and S. A. E. McCallan. H. P. Burchfield will talk on "A Kinetic Method for Measuring Action of Different Insecticides."

**Smith-Douglas Has Good
Safety Record in 1954**

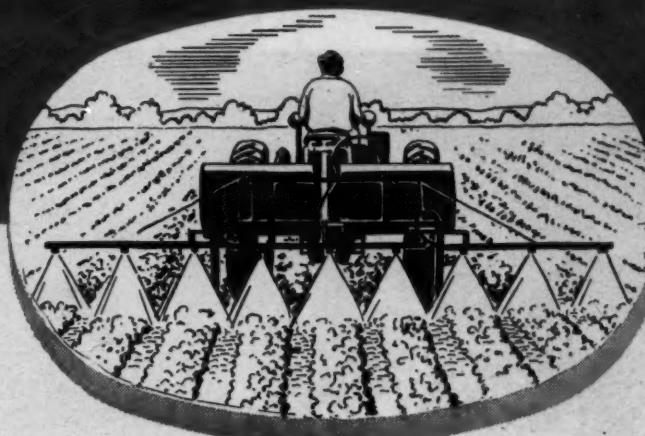
NORFOLK, VA.—Smith Douglas Co. enjoyed its second-best safety record during 1954, according to an announcement by Vernon S. Gornto, safety director. The accident frequency rate for 1954 was 3.92 as compared to 7.92 for 1953. The company's best record was established in 1951, however, when the frequency rate was only 2.88.

Mr. Gornto says that the number of lost time accidents in S-D plants was zero from July 26 to Dec. 16, during which more than a million man-hours were worked. This is 300 man-hours more than the greatest number previously worked in any one period without a lost time accident, Mr. Gornto reports.

MR. DEALER

Your Customers Need

WEED KILLERS!



**You Can Sell Them
Thompson-Hayward DED-WEED
with Confidence, because . . .**

You know that DED-WEED represents the latest advance in agricultural chemistry. Every DED-WEED product is farm-tested...of proven effectiveness...economical to buy...and easy to use.

Whether a customer wants to control weeds in field or pasture, there is a Thompson-Hayward DED-WEED formulated for his specific need. Sell DED-WEED for troublesome weeds. Sell DED-WEED for woody growth and hard-to-kill weeds.

Stock up now on the formulations of Thompson-Hayward DED-WEED, needed in your locality. Be ready to meet the demand that is bound to come soon.

Our Local Staff Can Help You and Your Customers Thompson-Hayward maintains warehouses of our own and sales offices in 18 different cities. The Thompson-Hayward headquarters nearest you is staffed with men who know your particular local conditions and what products will serve your customers best. Don't hesitate to call the Thompson-Hayward office nearest you at any time for advice on any agricultural chemical problem.

**Faithfully
Serving
Agriculture
for More
Than
37 Years**

**THE
COMPLETE LINE
OF
THOMPSON-HAYWARD
AGRICULTURAL
CHEMICAL
PRODUCTS**

Includes . . .

INSECTICIDES FOR CROPS

Dieldrin Spray WE-15
Aldrin WE-25
Heptachlor E-2
Tri-6 (BHC)
Ded Tax (DDT Products)
Phosfume (Parathion Products)
Toxiclhor (Chlordane Products)
Phenacide (Toxaphene)

FLY SPRAYS

Dairy Cattle Spray
Methoxychlor
Malathion
Lindane (Lindane Products)
Pyrotex (Pyrethrum Products for Dairy Cattle and Food Processing Plants)

WOOD PRESERVATIVES

(Containing Penta)

Termi-Trol

Permagard

GRAIN FUMIGANTS

Fumigas

Weevil Kill

DISINFECTANTS

Animal Dip (Coal Tar)

Septigard

RODENTICIDES

(Warfarin Products)

Rat-Trol (Bait and Concentrate)

CRUDE DRUGS

**VITA-RICH FEED
FORTIFIERS**

**MIN-RICH TRACE
MINERALS**

**POULTRY AND HATCHERY
SUPPLIES**

**SEED DISINFECTANTS
AND INOCULATORS**

**THOMPSON-HAYWARD
CHEMICAL COMPANY**



KANSAS CITY, MISSOURI

**18 SALES OFFICES and WAREHOUSES
OF OUR OWN**



Inorganic Chemical Output in November Higher than Year Ago

WASHINGTON — November 1954 production levels of industrially important inorganic chemicals in the U.S. were generally lower than those reported for the previous month but higher than for the corresponding month of 1953, according to information compiled by the Bureau of the Census and collected in cooperation with the Business and Defense Services Administration, Department of Commerce.

Declines from October 1954 were reported for 29 of 51 chemicals, while the output of 20 was higher. In comparison with the November 1953 data, the November 1954 reports show increases for 25 chemicals and decreases for 11.

Among the heavy volume chemicals, sizeable gains over the preceding month as well as over the

November 1953 levels occurred in the production of synthetic anhydrous ammonia, ammonium nitrate, ammonium sulfate, phosphoric and sulfuric acids.

The November 1954 output of the alkalies, soda ash, caustic soda and potash, also exceeded the quantities produced for the corresponding month of 1953.

Inventories at the producing plants during the month showed gains for 27 chemicals while the quantities on hand, at these sites for 22 products declined.

Florida Consumption

TALLAHASSEE — Fertilizer consumption in Florida during December, 1954, totaled 166,547 tons, according to the Fertilizer Statistical Division of the Florida Department of Agriculture. This total included 119,545 tons of mixed fertilizer and 47,002 tons of materials.

Modern Methods Boost Wisconsin Farm Output

MADISON, WIS.—From a subsistence level farm to a farm bringing in a gross income of \$12,000 to \$15,000 a year—that's the result of ten years of renovating and remodeling work at the Electric Research Farm near Madison.

The 144-acre farm was badly rundown when purchased in 1945. Then two agricultural engineers at the University of Wisconsin, L. A. Brooks and F. W. Duffee, went to work to show what modern methods can do.

First step was to make the fields more productive.

Lime and fertilizer were added, gullies repaired, weeds brought under control, pastures torn up and reseeded and fences moved to make field work with modern equipment more effective.

Today the farm supports 30 cows and 12 head of young stock.

GEORGIA MEETING

(Continued from page 1)

ting "fertilizer using farmers to fertilize for maximum crop production."

"Farmers are going through a tremendous change," said Mr. Ding. He said that bankers in rural areas should look on farming as a business instead of a way of life.

Henry Cohen, Moultrie, Ga. banker, said his bank attempts to analyze loan applications from farmers just as it would loan applications from merchants.

Mr. Cohen said he was distressed about crop conditions this coming year in South Georgia which experienced its worst drought in more than 70 years this past summer. He pointed out that a lot of farmers still need rain even this late in the winter season.

Dr. George E. Smith, professor of soils, University of Missouri, speaking at the society's annual banquet, backed up Mr. Sutton's statement regarding the need for better fertilization in crop production. He illustrated his talk with colored slides.

During the business session of the annual meeting the society members voted to purchase 1,000 large handbills giving the 11 recommended fertilizer grades. These handbills will be put up in appropriate places prior to the planting season.

The society members also passed a resolution calling on the state department of agriculture to publish in its weekly agricultural newspaper the recommended fertilizer grades and the recommended fertilization practices for the production of major crops.

W. W. Harley, sales manager of the Southern Fertilizer and Chemical Co., Savannah, was elected president of the plant food society as the meeting came to a close.

Meeting in conjunction with the society, the state organization of university agronomists elected Orville Brooks, director of the Midville, Ga., experiment station chairman for the year. Warren Merchant, agronomist with the Coastal Plains Experiment Station, Tifton, Ga., was named vice-chairman.

The plant food representatives and agronomists were entertained by Spencer Chemical Co. following the annual banquet.

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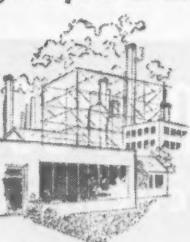
... is roughly one cubic foot of NITROGEN gas. Floating free in the air this nitrogen can't add to America's agricultural or industrial wealth. But Grace Chemical Company has opened a plant in Memphis, Tennessee, that "fixes" atmospheric nitrogen in the form of two very versatile compounds—ammonia and urea. (Shown in the photo are prills—tiny beads—of urea containing the equivalent to the amount of nitrogen gas between you and this page.)

Fixed in this way, nitrogen can enrich our crop farms, our livestock, and our homes—

through its use in fertilizers, feed supplements, and the manufacture of products ranging from toothpaste to television cabinets.

Output of the \$20,000,000 Memphis plant will be 72,000 tons of nitrogen a year. It will provide industry and agriculture these two forms of nitrogen from a dependable source—backed by a world of experience.

For AMMONIA and UREA look to —



COLORADO 44 BRAND

HIGHEST!
QUALITY FORMULATIONS

- Of: • AMINE
- BUTYL ESTER
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COMPANY**

HANOVER SQUARE, NEW YORK, N. Y.

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Better Selling

A SPECIAL CROPLIFE DEPARTMENT TO HELP RETAILERS IMPROVE MERCHANDISING KNOW-HOW



EXTRA SALES—Elmer Brooke, shown here in his salesroom, finds that issuing a news bulletin is an effective way of getting customers into the Farmers Grain & Lumber Co. at Sycamore, Ill. Mr. Brooke, manager of the firm, maintains an orderly appearance in his salesroom and numerous customers commend him on this practice. Mr. Brooke gives every farmer whose name is mentioned in his news letter a gift if he calls for it in person. It has been found to be an effective sales promoter.

'Elmer's Letter' Builds Extra Business, Makes Friends for Illinois Retail Dealer

In the Sycamore, Ill. area farmers have been receiving "Elmer's Letter" for five years, and they like it and look for it once a month. Elmer's Letter is published by the Farmers Grain & Lumber Co., and is edited by Elmer S. Brooke, manager of the company.

This mimeographed publication, sometimes running as large as four single sheets, mimeographed on both sides, and stapled at the top, goes to approximately 600 farmers in the trade area. Fertilizer, farm chemicals and other farm needs get a fine play in this popular publication. Mr. Brooke states that the news letter helps his firm get more business, and that farmers are always telling him and his employees that they want this or that, advertised in Elmer's Letter.

Mr. Brooke has his own mimeograph equipment, including the printing machine, the pens and stencil boards, etc., required to do a first class job. Most of the time the news and sales messages are typed right onto the stencil and printed thus, but often Mr. Brooke likes to give the publication a personal touch by lettering in some of the copy.

This hand lettering is painstaking work, but Mr. Brooke likes to come to the office and do it at night. One time he did an entire front page of the news letter with hand lettering, and it was a good job which got a lot of comments.

Mr. Brooke says that it costs only 1½¢ to mail each copy of the news letter. He has each letter addressed individually. In this way the personal touch reaches the attention of the farmer who sees that this firm took the trouble of getting his right name and address on a personal mailing list.

Here is a quote from one column

of the paper which shows its friendly approach.

"George Johnson has purchased and taken possession of, and is living on the farm formerly owned by Emil Harker. Emil bought and is living on the farm once owned by Frank Lee east of Sycamore where Raymond Larson has been residing."

"We try to get the names of some local folks in each issue and if you find your name in it, be sure to stop in at the office and call our attention to the fact and take home a nice gift. It is our way of saying 'Thanks for your patronage'."

Mr. Brooke tells his trade area friends much about various products in his letter. For example, an article on fertilizer said in part:

"The name of our fertilizer seems to be on everyone's lips. Every day we hear remarks like the one Elmer Carlson made to the effect that he likes three kinds of fertilizer quite well but our brand is his first choice, and then left an order with us for five tons of 3-12-12-18-7-1. If you haven't read in previous issues of Elmer's Letter what the 18-7-1 (26% extra) over and above the 3-12-12 (27%) is, please give us an opportunity to explain it to you. Order today."

In fact the farmer who looks over every issue of Elmer's Letter receives many buying suggestions, such as:

"Need nitrogen? You've seen the ads in farm magazines on the new non-acid forming 'A-N-L' ammonium nitrate limestone fertilizer. See sample in office . . ."

A good example of a small ad used in the bulletin is:

"Arasan treatment is popular. Out of nearly 15 tons of seed sold so far we have practically no orders which do not want their seed treated with Arasan—a disinfectant. We have sold this product for four years now and

(Continued on page 19)

RINGING THE cash register

Merchandising Hints for The Retailer

Let There Be Light

A well lighted store makes it more attractive and inviting to people. It is said that one of Wanamaker department store's slogans is, "What people see they buy." A clean, attractive, well lighted store is a big asset to selling merchandise. The use of cards suggesting benefits and listing prices is a potent means of convincing the customer to buy. Displays in the middle of the store should be kept lower than those on the outside.

Always Be First

Meeting today's competition does not mean beating the price, a very successful retailer replied when asked to explain the reason for his firm's growth. He continued: "I don't worry about competition. I keep myself so busy there is not time to worry about competition. I always try to keep in mind those fundamentals we know but often neglect. Have the cleanest store in town with floors just as clean as those in your own home. Have the cleanest fixtures and cleanest windows. Keep the cleanest stock, with stock and shelves free of dust. Have the cleanest back room, especially when a large part of the trade comes in through the back way. Keep yourself as neat as possible and your employees will attempt to do the same. Maintain the friendliest store in town—friendly to every customer and all personnel. Be the quality store in town—have the best stock and change displays regularly. Have the best organized personnel, with everyone knowing his or her job as well as store policies. Be the first to congratulate a customer on a big event in their lives, eg., birth of a child. Be the first in every new, worthwhile advertising promotion. Establish a good reputation—such a reputation that customers can say nothing but good to you, your personnel and your store. Such good words are worth more than all you can say about yourself in a page of advertising. Be alert to new promotional ideas. Exchange ideas with other retailers. Have salesmen watch for and tell you of successful promotions in other areas."

6 Golden Rules

There are six "golden rules" of good customer relations, according to a sound-slide film, "Five Important Minutes," produced by the Ralston Purina Co. They are: 1. Greet a customer promptly; 2. Call him by name; 3. Smile at him; 4. Find out what he wants and get it promptly; 5. Make sure he knows how to use it, and 6. Thank him and invite him back. The customer appreciates a prompt "hello" when he enters the store. It makes him feel he's in a friendly place, the film points out. Everyone is pleased when he is called by name. This makes the customer feel important and at home. A cheery, friendly smile shows him you're glad he came in the store. "May I help you" or a similar phrase conveys a sincere desire to serve. For top results the customer must know how to use the product correctly and never fail to thank him and invite him back, whether he bought merchandise or not.



Profit Slogans

If you are looking for short, punchy profit slogans that rhyme and desire to post them around your store for the benefit of your salesmen and clerks, here are some suggestions: Quality goods are best to buy; Keep losses down and volume high. Mistakes that hurt your sales are rare. When each display is planned with care. On every item plainly say, How much the shopper has to pay. Proper use of colors gay, Helps to make your products pay. Clean clerks in a clean store, Make shoppers want to purchase more. It takes space to make a sale: Too little room makes profits fail. A clerk who doesn't use his head, Can put a business in the red. Records provide the tight control, Needed to reach the profit goal.

Better Selling

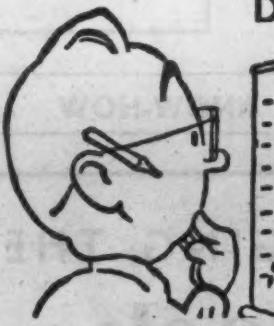
Richer Sales Fields for Dealers

CROPLIFE, Feb. 7, 1955

CROPLIFE

Doing Business With

Oscar & Pat



About a half hour after Oscar Schoenfeld arrived for work at the fertilizer and farm chemical store in which he was a partner with Pat McGillicuddy, a truck drove up to the warehouse doors. The truck was owned by Gil Dooley, long necked, jovial sign painter, a very likeable fellow who chewed Copenhagen snuff, liked sports and told the biggest fish stories this side of Canada.

"Hi, Oscar," called Gil, who sighted the pinch lipped partner watching him unload a big sign from his truck. "Give me a lift on this sign. Don't look at me like I'm a rattlesnake or somethin'."

Oscar looked around quickly, saw that the employees were busy, and then he reluctantly took hold of one end of the big sign. "Are you sure it's for this store?" he asked with a growl of disapproval.

"Sure thing," puffed Gil. "Now just let's hustle it into the salesroom. Pat ordered this sign, and he wants it here today—a good shape."

Immediately Oscar's face got a little red, and his blood pressure went up quite a few points as it always did when he discovered that Pat, the sales promotion minded man of the firm, had ordered something.

"Signs! Sales promotion!" snorted Oscar. "Just to make work for fellows like you. How much are you charging us for this sign?"

Gil Dooley set down his end of the big 5 by 6 ft. heavy cardboard sign with wooden frame, shoved his Copenhagen wad into his left cheek with an experienced tongue, and drawled quietly. "Listen, feila, I take pride in my work. It's worth every cent I charge. Signs are useful. They help promote business."

"How much is it?" asked Oscar relentlessly.

"For Pat, it's \$25," Gil said slowly. "If you had ordered it, I would have charged \$40 at least. Take a look at it. It's a beauty, even if I have to say so myself."

Oscar paled a little at the price. The cost-watcher of the firm, he always hated to pay any bill, even when due. He saved paper clips, rubber bands, old clasp envelopes, etc.—anything which could be used a second time, in his obsession to hold down costs.

"How to take a soil sample!" he shrieked, when he saw that that was what the attractive sign was about. The sign copy showed a farmer taking soil samples from various sections of his farm. The headline said "Have Your Soil Tested Now. Here's How to Do It."

Other copy said. "Start the year right by getting soil samples properly. Bring them to us and we'll have them tested for you at a small fee. Then buy your quality fertilizer from us based on expert recommendations."

"What's wrong with it?" asked Gil Dooley in a puzzled way, while Tillie Mason, the plumpish bookkeeper, reached for an ulcer powder to allay a queasy stomach, always aggravated by quarrels.

"We've got lots of booklets to tell farmers how to take soil samples,"

Oscar yelled. "Right on this table with other booklets on everything in the fertilizer and farm chemical field. And then Pat goes and spends \$25 for a sign like this which tells the same thing. Ach! Is he going crazy again?"

"Well, it's a nice sign, ain't it?" Gil asked angrily. "And I'll bet Pat knows what he's doin'! You guys seem to be selling lots of fertilizer last couple of years. And neither of you looks starved."

"The sign—yes, it's all right, but

we don't need it," barked Oscar. "Well," Gil said philosophical "you guys argue that out between you. But I still expect my \$25—a no 2% discount either, like you took on my last insecticide sign."

Oscar only glared at him.

Gil glanced at Tillie, then said in a low voice. "Oscar, you need loosening up. Come to my shop sometime. I've got some full size signs of Marilyn Monroe, Ava Gardner and Dagmar that I made myself, a la, if you know what I mean. Keep 'em in a closet and only show 'em to some of the boys. They get quite a kick out of them."

Oscar's lips got thin. "I'm a respectable married man," he said.

"I know," Gil said patiently. "I am I. But you can take a look at

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in farm publications in 1955 will accelerate the sales of ARCADIAN Products for Profitable Farming. Month after month, your farm customers will be reading about ARCADIAN Products in national, regional and state farm magazines.

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and over 1,000 LOCAL NEWSPAPERS will also carry the ARCADIAN advertising story to millions of farmers. This powerful campaign will produce MORE SALES. Will you get your share of this business?

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Fast-s

the seam

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45%
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now and then, can't you?" He winked. "Think it over." When Pat came in later, Oscar jumped him about the big soil testing procedure sign. He told him about the duplication of publicity, about the orders on the table and that the firm could get the National Fertilizer Assn's soil testing movie free of charge for showing to customers. And 25 would be saved.

Pat sat down, removed his hat and grinned. "Oscar," he said, "How you watch the costs. Sure, there's truth to what you say. They are excellent booklets and we want farmers to have them and read them. But we've got to use salesmanship to get them to take them and read them."

"You act like they are babies," snapped Oscar. "If they don't use the booklets and read them, it's their

hard luck."

"No, it's ours," persisted Pat. "The farmer who takes soil samples and takes them right and has the soil tested, will buy our fertilizer in the recommended quantities. Then he'll get better crops and we'll sell more fertilizer."

"I still say the sign is wasted," Oscar said stubbornly.

"By putting that sign on the wall today and leaving it up for many months," Pat said patiently, "we are going to call soil testing to the attention of every person who comes into the store whether he likes it or not. He'll see the sign, be reminded of soil testing and urged to get started. Without the sign, not too many farmers would be reminded of it so often. That sign will start the ball

rolling for soil testing and better fertilization for many farmers."

"Bah," said Oscar, going back to his desk, orderly as any in town, and picked up one of his six carefully sharpened pencils. "If you are going to spend money so recklessly I'd better check the discounts again to see if we can make up part of the loss somewhere."

"There's more to this soil testing story," Pat said. "The county agent is going to give me samples of all the different types of soils found in this county, with typed cards naming the soil, its deficiencies in general, the type of crops best grown on it, etc."

"I'm going to use these samples and signs in a window display. Many farmers will look over that

Better Selling

Richer Sales Fields for Dealers

display, too. Between those soil samples and this big sign on the wall, I have a hunch many farmers will bring in samples to have tested."

"How much will the county agent charge for this?" Oscar asked suspiciously.

"Not a cent," Pat replied. "He is glad to cooperate for such a display helps farmers to farm more efficiently."

"Huh," grunted Oscar. "That's better. I've got no objection to ideas that we don't have to pay for. But don't let them take up too much of your time so you don't have any time for collections. There's a big list on your desk right now—been layin' there for two days!"

"I know, I know," sighed Pat. "I'll have to get after them—maybe to tomorrow."

High Fertilizer Profit-Use Level Set in Minnesota

ST. PAUL — Although nearly 300,000 tons of commercial fertilizer went on Minnesota cropland in 1954, farmers could advantageously use six times that much in yield-hiking and soil improvement.

This is the estimate of two University of Minnesota soils authorities, William P. Martin and Harold E. Jones. Mr. Martin is head of soils, Mr. Jones is extension soils specialist.

In an article in the latest issue of Minnesota Feed Service, a University Agricultural Extension Service publication, they point up recent trends in fertilizer use. They include:

Because of a state law enacted in 1949 that field crop fertilizer contain not less than 27% plant food and because of strong industry cooperation, plant food in mixed fertilizers increased from 26% in 1949 to 36% in 1953.

In 1940, phosphate was the main fertilizer. Although it's still important, potash and nitrogen are coming into wider use. In 1950, only a few thousand acres of corn received straight nitrogen. But in 1954, more than half a million Minnesota acres got nitrogen, either as sidedressing or broadcast before planting. This increase came from a strong educational program showing nitrogen's value in increasing corn yields and was helped by a large buildup of nitrogen supplies.

Widespread use of anhydrous ammonia and nitrogen solutions along with solid forms of nitrogen has sparked a new multi-million dollar Minnesota industry—the custom application of nitrogen and other fertilizer.

Progress in fertilizer recommendations by the university's Agricultural Experiment Station has been as rapid as the growth of fertilizer sales. In 1945, for example, recommendations for corn on fields low in organic matter and which had no legumes or manure for two years were about 40 to 50 lb. plant food per acre. This meant 100 to 125 lb. 4-24-12, 5-20-20, or 8-16-16 in the row at planting.

A similar field now is recommended for 175 to 200 lb. plant food per acre—some broadcast before planting, some as row starter at planting, some as nitrogen side-dressing at second cultivation.

FARM POPULATION DOWN

COLLEGE STATION, TEXAS—Texas' farm population is now lower than at anytime since the 1870's. Only 13.7% of the state's total population resides on farms and ranches. The number of farms has dropped in the last four years from 332,000 in 1950 to 281,000.

Get you on the FAST-MOVING ARCADIAN LINE!

The Biggest Advertising Campaign in the history of the fertilizer industry will be working for you this year, if you handle the ARCADIAN line. Big, colorful advertisements in many leading farm magazines, steady farm radio promotion, and local newspaper advertising at the peak of the fertilizer buying season . . . never before has any fertilizer company given their dealers such a tremendous advertising boost. ARCADIAN is spending big money to help you make more sales and more profits.

Fast-stepping changes in agriculture are bursting the seams of old-line selling to farmers. ARCADIAN

fertilizer products are as modern as tomorrow's agriculture. New and better fertilizers and new and better equipment for applying them faster at lower cost are building a big, new market among your customers. ARCADIAN advertising is helping you to capture this market, if you handle the modern ARCADIAN line.

TAKE ADVANTAGE of this great, new sales opportunity. Mail this coupon NOW!



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45% Nitrogen Pellets
- 12-12-12 Granular
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Improved Granular
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Pelleted
- Nitrogen Solutions
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URAN® and FERAN®
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NITROGEN DIVISION Allied Chemical & Dye Corporation
40 Rector St., New York 6, N. Y.

Please provide me full information on the products I have checked at the left.

Please have an ARCADIAN salesman call on me.

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FIRM _____

ADDRESS _____

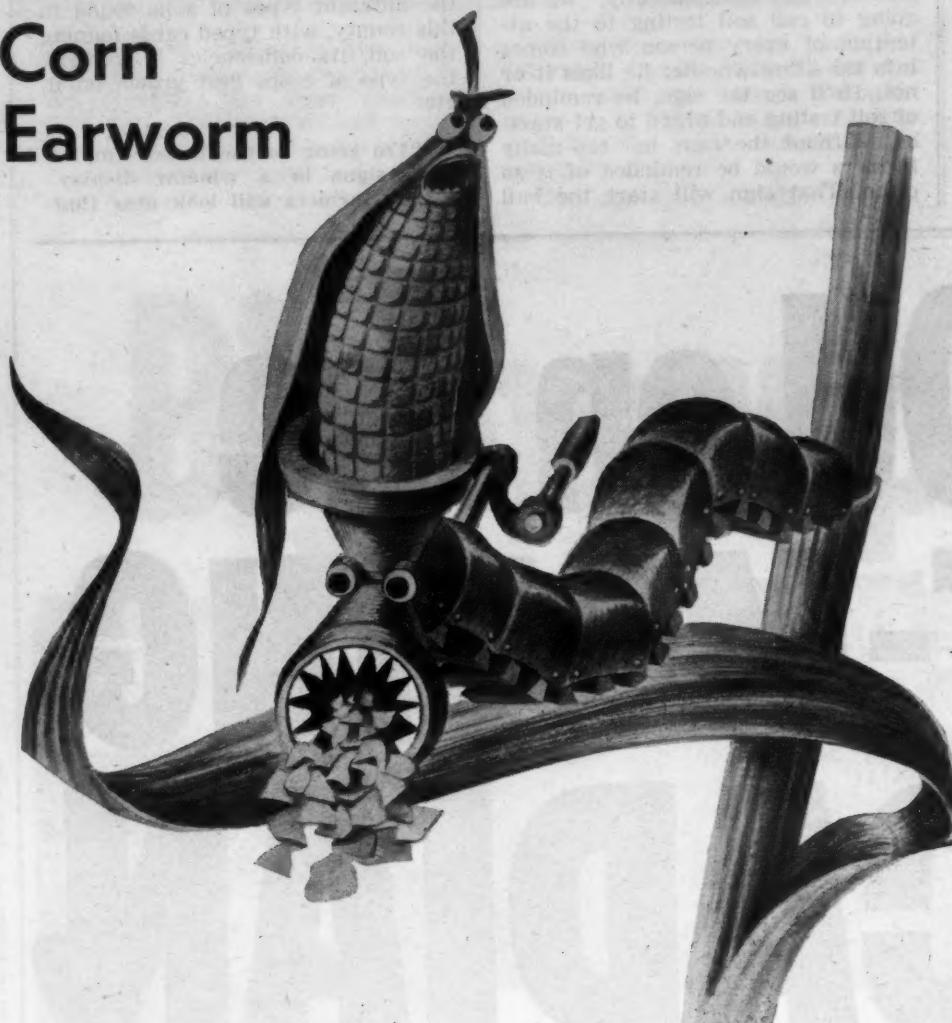
CITY _____ STATE _____



BUG OF THE WEEK

Mr. Dealer Cut out this page for your bulletin board

Corn Earworm



How to Identify

In the larval stage, the insect is in the form of a worm about an inch in length, varying in color from brownish to greenish. It is the larva that is found within the ear of corn.

Damage Done by Earworm

When small, the larvae feed downward, following the silks into the ear tip. Serious damage to the ear frequently results from their feeding and from the fermentation or molds that follow. The insect also attacks cotton as a bollworm, but cotton is not its preferred food. Its total damage to both cotton and corn runs into many thousands of dollars annually.

Habits of Earworm

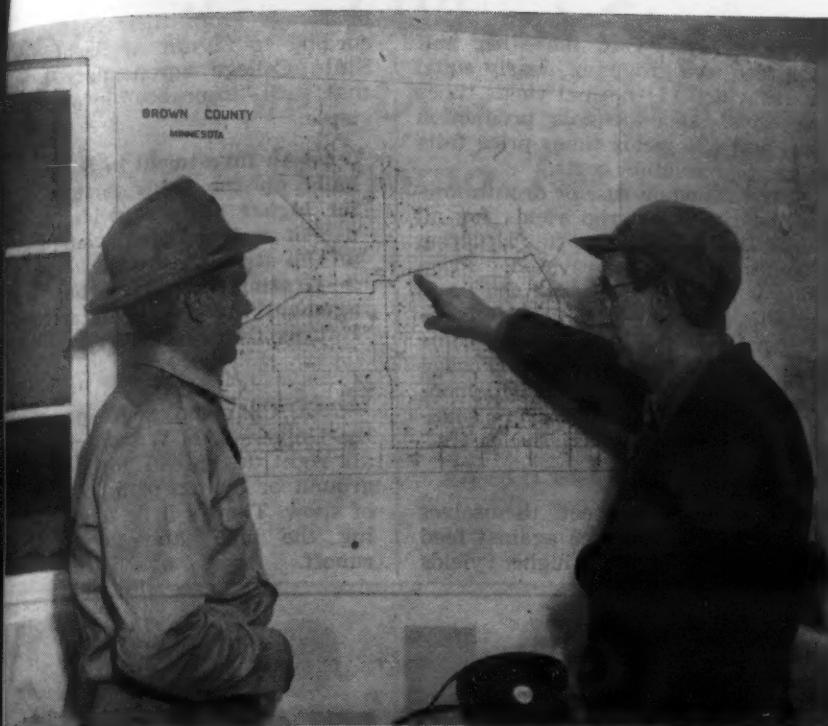
The moth lays its eggs usually on the corn silks and these eggs hatch in from 2 to 8 days. As the larvae grow within the ear, they leave the ear, enter the soil and enter their pupal stage. From this, the moth emerges. The development from egg to adult takes about 30 days in midsummer. Pupae produced in late summer or in the fall, may pass the winter in the soil and become moths the following spring or early summer. Usually two generations are developed annually in the north, but in the south there may be five generations or more.

Control of Corn Earworm

Sweet corn can be protected by spraying an emulsion comprising 3 qt. 25% DDT emulsifiable concentrate and 2.5 gal. white mineral oil with enough water to make 25 gal. (In smaller quantities, one fourth pt. DDT emulsifiable concentrate and three fourths pt. mineral oil with water to make a single gallon of spray.) Timing is of great importance since the pest must be reached by the insecticide before the worm gets inside the ear. A suggested schedule is offered by USDA as follows: Apply spray to the ears one day after silks appear in the field and again two days later. A third application two days after the second, usually increases the control. Only enough of the spray should be used to wet the silks. Approximately 25 gal. of spray is enough for a single acre of corn; a gallon will take care of a plot about 17 by 100 ft. A spray similarly prepared, says USDA, can be applied to the entire plant to reduce "budworm" damage by the earworm to sweet corn before tasseling and silking. This spray should include only 1 1/4 gal. mineral oil in a 25-gal. lot. For application on a commercial scale, USDA suggests use of a high-clearance power sprayer with hollow-cone nozzles adjusted to give adequate but not excessive coverage of the ears.

Drawing of corn earworm furnished Crolife through courtesy of E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.

Previous "Bug of the Week" features are being reprinted in attractive 24-page booklet, priced at 25¢ single copies; reduced rates in quantities. Write Crolife Reprint Dept., Box 67, Minneapolis 1, Minn.



MINNESOTA DEALER—Robert Johnson, left, assistant manager of the Sleepy Eye, Minn., branch of the Minnesota Liquid Fertilizer Co., is shown above with a customer, who points out his farm on an office map.

Information Rack, Filled With Fertilizer Literature, Boosts Sales for Minnesota Dealer

By AL. P. NELSON
CropLife Special Writer

Farmers who come to the Sleepy Eye, Minn., headquarters of the Minnesota Liquid Fertilizer Co., and ask about liquid nitrogen's value as a fertilizer, perhaps with some skepticism in their tones, are handled courteously by Dwayne D. Thoreson and his staff.

To facilitate the spreading of information, Mr. Thoreson has built an information rack in the firm's office, which is well stocked with a wide range of fertilizer literature.

Prominent in this rack are the current farm magazines. On them appear markings in red pencil such as "Page 34" or "Page 87," etc. These markings refer to articles in sectional and national farm publications detailing the use of liquid nitrogen and the results obtained.

Mr. Thoreson and his staff use such marked farm magazines in the firm's sales program. It takes only a minute to open a farm magazine and

answer the farmer's question about liquid nitrogen by showing him the article, quoting the authority and pointing out the pictures. The captions below the pictures usually tell the story in a nutshell and thus provoke the farmer's interest.

"We find these farm magazines very helpful in selling," states Robert Johnson, assistant manager of the Sleepy Eye branch. "Some farmers who ask us questions have seen the magazines and the articles on liquid nitrogen. Others have not. In any case, it's a powerful sales argument when we can show such authentic articles and pictures to back up our sales story."

The literature rack, also contains booklets from the various state universities on fertilizer facts.

The Minnesota Liquid Fertilizer Co. also issues a seasonal bulletin on the activities of its company and the use of liquid nitrogen, a bulletin which each branch manager sends to farmers whom he has on his mailing list. The information rack at the Sleepy Eye branch also has many of these bulletins, free for the taking by any farmers.

One of these bulletins contained a statement by B. W. Smith, president of the Minnesota Liquid Fertilizer Co., Minneapolis, on the increasing use of anhydrous ammonia on mid-western farms.

Part of the statement read:

"... Educational tests and experiments are an important part of our program in bringing farmers information on the best use of nitrogen, and our program recognizes the necessity of proper balance of nitrogen with potash and phosphorus."

The company has bulk plants at Blue Earth, Fairmont, Farmington, Hutchinson, Gaylord, Jackson, Kasson, LeSueur, Olivia, Kenyon, Pipestone, Slayton, Madison, Mapleton, Marshall, St. James, Waseca, and Windom, in addition to Sleepy Eye. Its service area grew from 6,300 square miles in 1953 to 18,000 square miles in 1954.

At Sleepy Eye the growth of the use of liquid nitrogen sales is seen

from the fact that in 1953 the firm had orders to cover 400 acres, while up until May, 1954, orders for 4,000 acres were on hand.

Mr. Johnson reports that often a farmer will want to try the application of anhydrous ammonia and stage a test on 30 or 40 acres the first year. Then if this works out, he will double or triple the acreage fertilized the second year.

Out of Sleepy Eye the firm works several applicators and also rents two. The company sells applicating machines as well and finds that many farmers are considering the idea of eventually owning their own applicating equipment.

The rate of liquid nitrogen application in this area is approximately 40 lb. per acre on small grain and about 60 lb. on corn.

Triple Mixtures Demonstrated at Nebraska Conference

LINCOLN, NEB. — A demonstration of mixing herbicides, insecticides and fertilizer was one of the highlights of the annual Nebraska Weed Conference, held here recently.

The demonstration was performed by Paul F. Sand, Neal E. Shafer and Melvin K. McCarty of the University of Nebraska Agronomy Department.

One phase of the demonstration showed that the various chemicals can be mixed successfully only if mixed in the proper sequence.

Mr. Shafer demonstrated the proper mixing of pentachlorophenol-oil and water emulsion.

Fertilizer Helps Corn Champion

CHICAGO—A "pantry-full" of nutrients, plus good soil structure and plenty of organic matter combined to help Willard C. Kirk win the title of North America's "Corn King" at the recent International Hay and Grain Show of the International Livestock Exposition here.

Mr. Kirk, who farms 335 acres near Jeffersonville, Ohio, credits a "put-back" program of soil replenishment that builds and maintains the fertility level, with a major part in making his victory possible.

Mr. Kirk listed this program as: 1—Feeding the soil a well balanced supply of nitrogen, phosphate and potash fertilizer; 2—liming the soil as needed every three years; 3—returning manure and crop residues to the soil; 4—using a rotation that gives a soil-building legume crop two years out of four.

The 1954 championship corn was grown on a field plowed out of an alfalfa sod last spring. Before seedling, Kirk disced in 100 lb. of ammonium nitrate. Then in the row he added 250 lb. per acre of a complete fertilizer. The soil had been previously fertilized by regular additions of plant food to preceding crops in the rotation.

Mr. Kirk had about 175 acres in corn, with yields that averaged close to 90 bu. per acre.

He reports that fertilizer use is increasing steadily in his home community of Fayette County, Ohio.

Insure against wireworms for only 16c per acre

ISOTOX 25 Seed Treater F controls wireworms, seed corn maggots, and other soil insects—also gives added disease protection at planting time

It's the most effective and economical seed treatment you can buy! For only about 16¢ per acre ISOTOX 25 Seed Treater F gives you *dollars upon dollars* of crop protection from wireworms, seed corn maggots. Also gives added disease protection to seeds previously treated with fungicide.

Over 5,000,000 acres have been treated with ISOTOX Seed Treater during the past five years, proving to thousands of farmers that ISOTOX brings top germination...insures bigger yields, healthier stands...saves "extra" seed costs...saves time and labor of replanting due to insect damage. Last planting season, more than 20,000 new farmer users specified ISOTOX 25 Seed Treater F.

For low-cost "life insurance" for your crops—insist on ISOTOX—the pioneer seed treater—designed exclusively for seed treatment. Recommended for corn, soybeans, beans, cotton and many other crops.



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CALIFORNIA SPRAY-CHEMICAL CORP.
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LIQUID FERTILIZER

Manufacturing Plants and Formulation Franchises for Local Areas

Plant installations completely engineered and equipped.
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FARM SERVICE DATA Extension Station Reports

Michigan State College pointed out in a recent bulletin the importance of using improved practices to cut the unit cost of production on farms. As an example, the college says that by applying 200 lb. fertilizer per acre as top dressing, instead of the present 55 lb. average, farmers could increase alfalfa-brome grass hay yield from the current 1.8 tons to 2.4 tons.

Chemical brush control methods have been tried at the Red Plains Conservation Experiment Station, Guthrie, Okla. since 1945, the Oklahoma Experiment Station reports. To date, the most effective winter treatments have been with low-volatile esters 2, 4, 5-T. Concentrations of 11 lb. 2, 4, 5-T in 100 gal. diesel oil applied as a basal-bark treatment between Dec. 15 and March 15 have proved most successful. Similar results have also been obtained with low-volatile esters of 2, 4-D applied at twice the above concentrations.

Fertilized wheat came through the 1954 drought with flying colors, reports Dr. Floyd Smith, agronomist of Kansas State College. He says yields on fertilized plots averaged 39 bu. per acre compared to only 26 bu. on unfertilized fields.

This meant an extra 13 bu. of wheat per acre from the fertilized fields. These extra bushels, says Dr. Smith, gave farmers a return of \$2.50 for every dollar they invested in soil improvement.

Dr. Smith reports that hot, dry weather hampered wheat growing operations in many parts of Kansas last season, but in spite of these unfavorable conditions, the wheat response to phosphate and potash fertilizer, was "fabulous," he said. Nitrogen fertilizer nearly doubled wheat yields in North Central Kansas.

Rebuilding "underprivileged" pastures can be a profitable farm operation in 1955, reports Dr. G. E. Smith, University of Missouri agronomist. Permanent pastures, says Dr. Smith, are the most neglected of all farm crops. Much of the Midwest's pasture land was low in fertility in the beginning, or it has been exhausted by constant cropping.

As a result, he says, it is producing low yields of poor quality forage. Dr. Smith reports, however, that an investment in pasture improvement can pay big returns.

Hay yields have been increased from less than one ton per acre to more than six tons by adding high nitrogen fertilizer in college experiments and demonstrations under practical farm conditions. In many Midwestern demonstrations meat production has been increased from less than 100 lb. to more than 500 lb. per acre when fertilizer was added.

Dr. Smith says that increasing attention is being given to the use of nitrogen along with phosphate and potash to keep a proper balance of grasses and legumes in the pasture growth. Soil tests can be a guide in determining the amount and kind of nutrients needed, according to Dr. Smith.

Low crop yields and lack of top grade-quality in beef calves currently head the list of farm income "soft spots" for North Dakota farmers, in the opinion of H. W. Herbison, North Dakota Agricultural College Extension Service marketing economist.

"About half our crop producers have brought yield performance up to the point where they've had a chance for profit in recent years from

small grains, flax and corn," Mr. Herbison says. "But, the other half falls into two groups of nearly equal size in which (1) normal yields times price just about equals production cost, and (2) yields times price fails to meet production costs.

"In years when rust or drought lowers the potential crop yields for all North Dakota farmers, this situation becomes more aggravated. Price alone is not the answer to the basic problem of below-average crop output per acre. The answer must come from weed control, fertilizer usage and cultural practices already demonstrated to be effective in every county of the state the past five years."

Farmers can protect themselves with low-cost insurance against feed shortages, by getting higher yields

of forage from their pastures, according to Myron A. Bachtel, Ohio State College agronomist. He says that such "insurance" involves three steps:

1—An investment in fertilizer to build up the soil's fertility level for higher pasture yields; 2—The use of well adapted winter-hardy alfalfa strains resistant to disease; 3—Grazing and harvesting management that gives you maximum returns from every acre.



C. J. Chapman, soils specialist at the University of Wisconsin, says it's all right to spread lime on frozen ground or on top of a light coating of snow. There's little danger of losing the lime later in the spring runoff.



aldrin

sales

and no wonder... as more and more uses are found for these two top insecticides!

IN AN AMAZINGLY short time the sales of aldrin and dieldrin have skyrocketed. There's a good reason! Both of these powerful insecticides are already approved as top controls of many kinds of crop pests... and constant research keeps uncovering more and more uses all the time.

The ever-growing list of approvals for aldrin and dieldrin means greater sales opportunity for you... a year-round market and profitable turnover.

aldrin controls such soil pests as:

- rootworms
- wireworms
- white grubs
- green June beetle larvae
- European chafer grubs
- sugar beet maggots
- Japanese beetle larvae
- onion and cabbage maggots

aldrin controls these pests above the ground:

- boll weevils
- fleahoppers
- rapid and tarnished plant bugs
- thrips
- cutworms
- grasshoppers
- stink bugs
- alfalfa weevil larvae
- fall armyworms... and others

An aldrin seed treatment controls these pests:

- seed corn maggots
- wireworms
- sugar beet maggots

And aldrin plus DDT is recognized as a top control for bollworms.

Fertilization of Wheat Can Offset Income Drop Caused by Controls, Oklahoma Tests Show

STILLWATER, OKLA. — Results of the 1954 fertilizer demonstration program conducted by the Oklahoma Extension Service provides striking evidence that proper use of fertilizer can offset the drop in net income from wheat despite a reduction in acreage because of crop controls.

The results of the program, with which representatives of the fertilizer industry cooperated, are summarized by Wesley Chaffin, extension agronomist, and Gaylord Hanes, assistant extension agronomist.

Their report divides Oklahoma into three areas, and yield and response data are presented for each area.

A portion of the report follows:

The response of wheat to fertilizer treatment was good in 1954 in most sections of Oklahoma. The percentage increase in yield varied in different areas of the state due to timeliness of spring rains.

Area I is made up of Lincoln County, which showed an average increase in yield of 54% at ten different locations in that county.

The average yield was increased from 23.9 bu. per acre without fertilizer, to 36.6 bu. where fertilizer was applied at a cost of \$9.68 per acre. This \$9.68 average investment in fertilizer gave an increase in net profit of \$19.20 per acre, or a return of about \$3 for each \$1 invested in fertilizer.

The proper use of fertilizer will more than off-set the drop in net income from wheat due to acreage control. One hundred acres of fertilized wheat produces the same net income as 145 acres not fertilized, as shown in Table 1.

Table 1—Net Income and Acreage Comparison in Area I

No.	Treatment	Gross production	Cost of	Net
acres		income	duction	income
145	None	\$7,658.90	\$1,740.00	\$5,918.90
100	Fertilized	\$8,082.00	\$2,188.00	\$5,920.00
100	None	\$5,280.00	\$1,200.00	\$4,080.00

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Area II is made up of an area of the state east of a line running south from eastern Woods County through eastern Cotton County with the exception of Area I. This area showed an average increase in yield of 45%.

The average yield was increased from 19.5% bu. per acre, where no fertilizer was used, to 28.2 bu. where the proper fertilizer treatment was made. This 8.7 bu. per acre increase was produced at a fertilizer cost of \$4.90 which increased the net profit an average of \$14.32 per acre. This shows a return of nearly \$4 for every \$1 invested in fertilizer.

Table 2—Net Income and Acreage Comparison in Area II

No.	Treatment	Gross production	Cost of	Net
acres		income	duction	income
146	None	\$6,292.00	\$1,752.00	\$4,540.00
100	Fertilizer	\$6,232.00	\$1,690.00	\$4,542.00
100	None	\$4,310.00	\$1,200.00	\$3,110.00

Table 3—Net Income and Acreage Comparison in Area III

No.	Treatment	Gross production	Cost of	Net
acres		income	duction	income
122	None	\$3,985.62	\$1,464.00	\$2,521.62
100	Fertilizer	\$4,068.00	\$1,524.00	\$2,542.00
100	None	\$3,271.00	\$1,200.00	\$2,071.00

One hundred acres of fertilized wheat will produce the same net income in Area II that can be received from 146 acres without fertilizer. It should also be noticed in Table 2 that the cost of producing this one hundred acres of fertilized wheat is smaller than production cost for the 146 acres without fertilizer, thus maintaining net income and at the same time, lowering the cost of production. The average cost of producing wheat without fertilizer was 61.5¢ bu., as compared to 59.9¢ bu. where fertilizer was used.

Area III includes that area of Oklahoma west of a line running from eastern Woods County, south through eastern Cotton County. Fertilizer demonstrations in this area showed an average increase in yield of 23%.

The average yield without fertilizer was 14.8 bu. per acre as compared to 18.4 bu. per acre where the proper fertilizer treatment was made. This increased yield meant a net increase of \$4.72 per acre, or a return of \$2.32 for every \$1 invested in fertilizer.

This is a smaller return on the fertilizer dollar than in 1953 when it was \$5.30 in Area III for \$1. In 1952, the demonstrations showed a return of \$4 for \$1.

Although the return on the fertilizer dollar in Area III was only \$2.32 for \$1 last year, this is nearly as great a return as received from all other production expenses (land preparation, seed, drilling, and harvesting) which was \$2.73 in return for every \$1 invested.

161 Bu. Yield Wins Minnesota Contest

ST. PAUL—Erling Burtness, Caledonia, Minn., has been named winner of the X-tra Yield Corn Contest conducted by the University of Minnesota's Agricultural Extension Service and the Farmer magazine of St. Paul.

Announcement comes from Harold E. Jones, extension soils specialist at the University. Second place went to Donald and Joyce Ericson, Goodhue, Minn.

Mr. Burtness achieved a 93 bu. per acre increase on his X-tra yield corn plot over a check plot that didn't receive the careful fertilization and other wise practices. The check plot yielded 68 bu. per acre, the X-tra yield plot 161.

TIME FOR NITROGEN

COLUMBIA, MO.—Nitrogen can be applied to wheat at any time now with little or no loss, says O. T. Coleman, extension soils specialist at the University of Missouri.

Long-lasting dieldrin controls such pests as these:

Cotton pests
• boll weevils
• thrips • cutworms
• fleahoppers
• and others

Turf insects
• Japanese beetle grubs
• ants • white grubs
• lawn chinch bugs
• sow bugs and others

Public Health pests
• houseflies
• mosquitoes
• fleas
• ticks
• cockroaches and others

Vegetable pests
• tuber flea beetles
• leaf miners
• onion thrips
• root maggots
• sweet potato weevils and others

Fruit pests
• plum curculio
• lygus bugs
• stink bugs and others

Cereal and forage crop pests
• armyworms
• alfalfa weevils
• chinch bugs
• pale western cutworms

Seed Treatment
• true wireworms • false wireworms
• seed corn maggots

To help you formulate aldrin and dieldrin, Shell provides the finest in technical service . . . and field representatives who work with growers, county agents and extension entomologists. Also, powerful advertising, *at the right time*, helps you make sales. Write for the very latest in technical information on these two outstanding insecticides.

LATEST! dieldrin . . . for household pests!

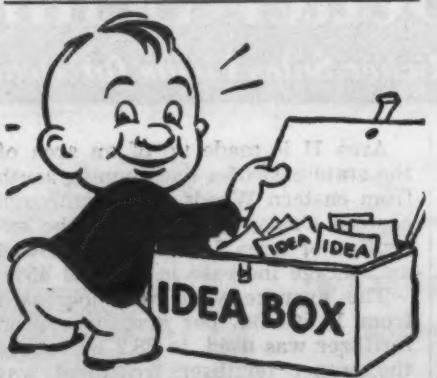
Now . . . dieldrin is approved and available to formulators for private-brand packaging to the great home market. Dieldrin is recommended for the control of roaches, silver fish, carpet beetles, ants, ticks, and wasps. Take advantage of this new profit opportunity.



SHELL CHEMICAL CORPORATION

AGRICULTURAL CHEMICALS DIVISION
CHEMICAL PARTNER OF INDUSTRY AND AGRICULTURE
P. O. BOX 1617, DENVER 1, COLORADO

Atlanta • Houston • New York • San Francisco • St. Louis • Jackson, Mississippi



What's New...

In Products, Services, Literature

You will find it simple to obtain additional information about the new products, new services and new literature described in this department. Here's all you have to do: (1) Clip out the entire coupon and return address card in the lower outside corner of this page. (2) Circle the number of the item on which you desire more information. Fill in your name, your company's name and your address. (3) Fold the clip-out over double, with the return address portion on the outside. (4) Fasten the two edges together with a staple, cellophane tape or glue, whichever is handiest. (5) Drop in any mail box. That's all you do. We'll pay the postage. You can, of course, use your own envelope or paste the coupon on the back of a government postcard if you prefer.

No. 6191—Rodent Poison Dispenser

The Solvit Chemical Co. has announced new developments in its product called by the trade name, Kelly's "See-In" Rodent Cafeteria. The unit holds one quart of liquid poison, 6 lb. of dry poison or both at one time. An inspection window permits ease in checking bait consumption. The unit is 7 1/2 in. high, 12 in. wide and 12 in. long. It can be attached to the floor. Constructed of galvanized steel, the unit has a bottom, preventing spillage on the floor. For more complete details check No. 6191 on the coupon and mail it to this newspaper.

No. 3662—Ad Reprints

Transichrome Co. has available new literature on its full color transparency process which explains a new special introductory offer and quotes reduced rates for quantity copies. These transparencies are made from actual ad reprints, tear-sheets or any other printed matter with full color fidelity, the company states. Shadow box, socket, cord and plug for point-of-sale display are also available. Certain changes in copy are possible with this method, it is explained. To secure more complete details check No. 3662 on the coupon and drop it in the mail.

No. 3661—Sales Leaflet

A four-page leaflet, listing 25 "ideas to help make more sales," has been developed by Kelly-Read and Co. Copies of the leaflet are offered at no cost. They cover such points as: Planning your working time; the importance of the first minute with the customer; making yourself understood; asking for the order, and keeping promises. To secure the leaflet check No. 3661 on the coupon and drop it in the mail.

No. 5063—Broadcaster

The Farmer Feeder Co., Inc., has designed its new Farmer electric



broadcaster so that it can be mounted on a tractor (front or rear), truck or jeep. It operates off any 6-volt battery. According to the manufacturer, this broadcaster evenly distributes all varieties of seed (including Brome), sowing up to 20 acres per hour and covering areas up to 30 ft. wide. Push-button operation is made possible when the unit is drawbar mounted. Only three bolts and a single wire are used to mount the unit, ready for operation. All motors are sealed against dust and, in addition, are factory lifetime lubricated. To secure more complete details check No. 5063 on the coupon and mail it to this newspaper.

No. 5091—Heating Tape

The Miller Manufacturing Co. has announced new developments in its product called by the trade name, Little Giant No-Freeze heating tape. Suitable for poultry and livestock fountains, as well as for various uses in industrial plants and factories, the product is claimed to resist oil, grease, mild acids and alkalies; can be operated continuously at temperatures up to 176° and works off an AC or DC light socket. It is claimed to be shockproof, fireproof and waterproof and has a self-contained electrical unit. The retail price quotation begins with a 6-ft. size. For more complete details check No. 5091 on the coupon and mail it to this publication.

Send me information on the items marked:

<input type="checkbox"/> No. 3661—Sales Leaflet	<input type="checkbox"/> No. 6191—Dispenser
<input type="checkbox"/> No. 3662—Ad Reprints	<input type="checkbox"/> No. 6192—Weed Killer
<input type="checkbox"/> No. 5055—Fumigant	<input type="checkbox"/> No. 6193—Conveyor
<input type="checkbox"/> No. 5063—Broadcaster	<input type="checkbox"/> No. 6194—Mixer Catalog
<input type="checkbox"/> No. 5067—Grain Cleaner	<input type="checkbox"/> No. 6195—Anhydrous Catalog
<input type="checkbox"/> No. 5070—Transports	<input type="checkbox"/> No. 6196—Bag Valve
<input type="checkbox"/> No. 5083—Pulley	<input type="checkbox"/> No. 6197—Brochure
<input type="checkbox"/> No. 5084—Indicator	<input type="checkbox"/> No. 6198—Fungicide Booklet
<input type="checkbox"/> No. 5091—Heating Tape	

NAME

COMPANY

ADDRESS

CLIP OUT—FOLD OVER ON THIS LINE—FASTEN (STAPLE, TAPE, GLUE)—MAIL

FIRST CLASS
PERMIT No. 2
(Sec. 34.9,
P. L. & R.)
MINNEAPOLIS,
MINN.

BUSINESS REPLY ENVELOPE

No postage stamp necessary if mailed in the United States

POSTAGE WILL BE PAID BY—

Croplife

P. O. Box 67,

Reader Service Dept.

Minneapolis 1, Minn.



the sleeve itself. It functions in much the same manner as a check valve in a water pipe, which permits the water to flow freely in one direction but not in the other. A company report claims that "It practically eliminates leakage and gives maximum sifting protection." The valve's fast action on the packing spout keeps the product out of the valve pocket, which reduces the chance of moisture getting into the bag through the "wick" action of hygroscopic products, it is claimed. To secure more complete details check No. 6196 on the coupon and mail it.

No. 5070—Bulk Transport

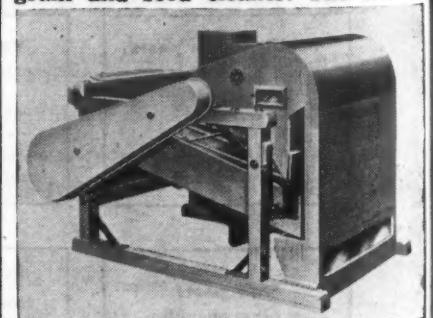
Now available is Baughman Manufacturing Company's bulk transport body, called by the trade name, Bulkmobile, which has a capacity of 780 cu. ft. Other models are available in lengths from 15 ft. to 33 ft., with body sides up to 36 in. high. Feeds, fertilizer and many other diverse materials can be transported, states the company. Discharge rates vary from 1/2 to two tons per minute, depending on the weight of the material. Four discharge attachments are available: 1. Screw conveyor; 2. belt and bucket elevator; 3. belt conveyor, and 4. distributor for spreading purposes. Among the body's features are full hydraulic operation for both body conveyor and discharge accessories, compartmented body for multiple deliveries, externally operated compartment doors and streamlined, all welded body with large heavy-gauge body hatches. To secure more complete details check No. 5070 on the coupon and drop it in the mail.

No. 5084—Level Indicator

A descriptive folder about a level indicator called Bin-Vue has been prepared by its manufacturer, Convair, and is available without charge. The folder contains construction diagrams, photographs, descriptions and price information about four models. The four are the standard, heavy duty, explosion proof and high temperature models. The indicator is suitable for powdered, granular, lumpy and wet materials and slurries, the folder states. To obtain the folder check No. 5084 on the coupon and drop it in the mail.

No. 5067—Grain and Seed Cleaner

Thomas Robinson & Son, Ltd., announces the production of a dual purpose cleaner, type PDm, offering high capacity at low power consumption. As a pre-cleaner the capacity is 15 tons an hour and five tons as a grain and seed cleaner. The man-



facturer states that the machine is highly adaptable. It can be installed in any building, with one or several floors. Feed can be directly from a bin, through spouting, or by elevator while power can be from an in built motor, line shaft. To secure more details check No. 5067 on the coupon and drop it in the mail.

No. 5083—Magnetic Pulley

The Homer Manufacturing Co., Inc., manufacturer of the Homer Hercules permanent magnetic pulley, describes this product's applications and features in a new illustrated 8-page bulletin, PY-260. These pulleys automatically remove tramp iron from feeds, chemicals and other materials, and separate ferrous from non-ferrous materials, the bulletin states. The bulletin includes diagrams, performance data, specifications and a guide for selecting proper size. To secure the bulletin check No. 5083 on the coupon and drop it in the mail.

No. 6196—Bag Valve

A newly designed inner sleeve valve for multiwall paper fertilizer bags is being introduced by the Bemis Bro. Bag Co. The "Mr. Little" sleeve valve, named for its inventors, is distinguished by the patterned creases in the valve sleeve and the design of

No. 6194—Catalog on Mixers

The Rapids Machinery Co. has recently released a two color descriptive brochure covering its line of fertilizer mixers and accessory equipment. Featured in the brochure are the firm's heavy duty industrial mixer

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No. 6197—Brochure

The Diamond Alkali Co. has prepared a 16-page brochure depicting the contributions made by the company's chemicals to agriculture and other industries. The booklet, called "15 Portraits in Print," contains 15 selected full-page, four color advertisements published by the company in recent issues of magazines. Interpreted in words and pictures are the diverse ways in which the company's chemicals are helping industries. Check No. 6197 on the coupon, send it to this publication and a copy of the brochure will be mailed without charge.

No. 6198—Fungicide Booklet

A new booklet describing the orchard fungicide, called Phygon-XL, for treating apple-scab, blossom blight, brown rot and cherry leaf spot, has been published by Naugatuck Chemical, Division of U.S. Rubber Co. The booklet, titled No. 32, contains information about Phygon formulations, dust application on fruits such as apples, cherries, peaches, prunes and plums and spray applications on these same fruits. General information on handling the product, its composition and advantages are also included. Check No. 6198 on the coupon, clip and mail it to receive the booklet.

No. 6195—Catalog

A complete catalog of equipment and supplies needed in the operation of anhydrous ammonia bulk stations and distribution points has been issued by the Pasley Manufacturing & Distributing Co. Nearly a hundred items are described and illustrated in detail in the 50-page booklet. The catalog also contains a handy NH₃ safety section which includes (1) properties, (2) vapor pressure facts, (3) safety precautions and (4) chemical properties of ammonia at various temperatures. For a copy of this catalog, please check No. 6195 on the coupon and drop it in the mail.

No. 6192—Weed Killer

A new service bulletin on the borate weed killer, called by the trade name, Tronabor, has been issued by American Potash & Chemical Corp. in connection with the product's use under asphaltic paving in such cases as airports, highways, parking areas, playgrounds and other similar applications. The new service bulletin augments information on Tronabor contained in a previously-issued bulletin describing its uses in oil fields, along railroad rights-of-way, along fence lines and other farm and industrial applications. The bulletin describes the product as a non-poisonous, non-corrosive borate weed killer that permanently sterilizes soil beneath a paved surface. Copies of either service bulletin can be obtained by checking No. 6192 on the coupon and dropping it in the mail.

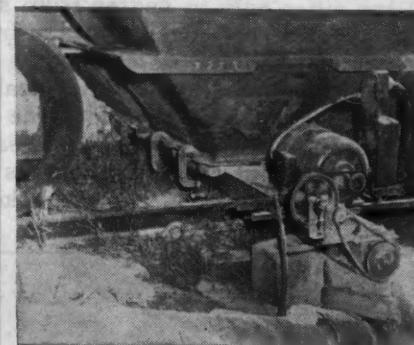
No. 5055—Grain Fumigant

A folder describing its grain fumigant, Lethogas, has been prepared by the Parsons Chemical Works. Entitled "Facts and Data on Parsons Lethogas," the folder tells how the product works as a fumigant for grain

weevil and certain other insects. The product forms a gas upon exposure to air, destroys by contact and gas fumes and is not a fire hazard, it is claimed. The product is sold in 5-gal., 30-gal. and 55-gal. drums for use in larger structures and in 1/2-gal., 1-gal. and 5-gal. cans for farm use. Facts about Kilane residual spray, an insecticide spray, are also included in the folder. Methods for the hand in hand use of Lethogas and Kilane to control weevils are outlined. To secure the folder check No. 5055 on the coupon and mail it to this newspaper.

No. 6193—Conveyor

A new conveyor, the Over-Track Unloader, is being manufactured by the Midstate Machinery Co. It is



being used to unload bulk fertilizer, feed and other materials being shipped in covered hopper cars. Company spokesman said one feature is that no hole has to be dug under the track, thus eliminating any water hazard. Also, this unloader makes it possible for the operator to spot a car and unload it anywhere he chooses, it is claimed. The photo shows the unit emptying a covered hopper car of rock phosphate. The P51 Unloader is inserted between the railroad tracks and the hoppers of the railroad car and fastened to the car hoppers by means of flexible canvas connections. A dust-tight operation is claimed. The capacity of the P51 is 30 tons per hour of rock phosphate and other materials weighing 90 lb. per cubic foot. Complete information is available by checking No. 6193 on the coupon and mailing it to this newspaper.

IRRIGATION IN TEXAS

COLLEGE STATION, TEXAS — A recent estimate shows that 14% of Texas cropland is irrigated and from it comes 35% of the state's income from crops. Some 5,439,603 acres on 33,937 farms located in 225 Texas counties are now under irrigation.

Fertilizer, Pesticide Aid Tomato Champ

LAFAYETTE, IND.—John Dillman has been named 1954 Indiana tomato growing champion for his record yield in the U.S. "Won" Tomato Club. He captured the championship by producing 140 tons of tomatoes on 6.92 acres, an average of 20.24 tons per acre.

Fertilization of the field consisted of the following: approximately five tons of manure, per acre, was plowed under; 125 lb. of 60% potash was put on top of the plowed ground with a wheat drill and disced into the ground; 400 lb. 4-16-16 fertilizer was applied to the ground with a wheat drill just before seeding time; and 350 lb. 4-16-16 fertilizer was put in the ground with a corn planter at seeding time.

Tomato plants were sprayed three times with D-14 Diathane.

PASTURE WINNER

CLEMSON, S.C.—L. C. Talbert, McCormick County, has been named first place winner in the 1954 Savannah Valley Green Pastures Contest. Winner of the \$80 second prize was Hugh E. Whetstone, Orangeburg County.

BEAIRD ANHYDROUS AMMONIA EQUIPMENT

Since the introduction of anhydrous ammonia as a commercial fertilizer, Baird engineers have worked closely with the industry to develop special equipment for handling this nitrogen-rich liquid fertilizer. Behind the Baird line of anhydrous ammonia equipment is the experience of thirty-six years in manufacturing pressure storage vessels for the petroleum and chemical industries.

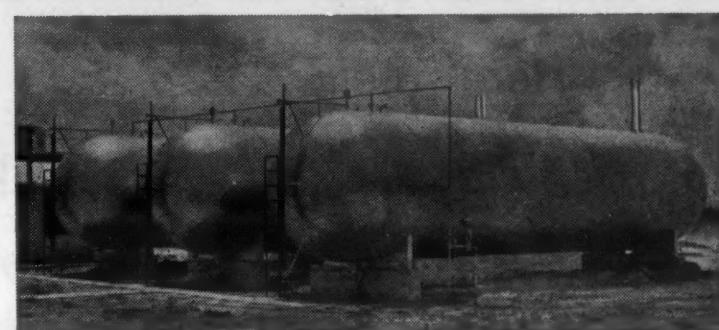
PACKAGED STORAGE INSTALLATIONS

Available on "Turn-Key" or "Install-it-yourself" basis

Now you can install bulk storage for anhydrous ammonia as a complete packaged storage plant. You may order it as a "Turn-Key" job or on an "Install-it-yourself" basis. On "Turn-Key" jobs the entire installation, including all assembly and final inspection, is handled by Baird service engineers. On "Install-it-yourself" installations, a Baird service engineer is available for supervision after tank has been located on foundations and is ready for piping.

Packaged storage plants may be installed with one or more tanks of the following sizes: 2,000, 3,000, 6,000, 12,000, 15,000, 18,000 or 30,000-gallon. These tanks are manufactured in our Shreveport factory and tested by X-Ray. Piping is pre-assembled to simplify field work.

Plant layout is planned to fit your individual needs and the entire installation engineered to meet state and code regulations.



PACKAGED STORAGE STATIONS—3,000, 6,000, 12,000 and 15,000-gallon. This patented Baird development is delivered complete, ready to operate. Includes integral steel pontoon type foundations and all necessary fittings, pump or compressor and safety controls.

TRAILER TRANSPORTS—twin-tank 5,400-gallon transport. Mounted on heavy duty tandem axle assembly. Smartly designed and finished in white enamel over primer coat.

TRUCK AND TRAILER TANKS—500 and 1,000-gallon, 1,000-gallon tanks made in 41" and 46" diameters, equipped with interior baffles and meet all state regulations. Available unfitted or fitted with highest quality fittings for top, or bottom withdrawal. Hose assembly supplied upon request. Extra fill valve coupling for dual filling to cut filling time in half. Finished in white enamel.

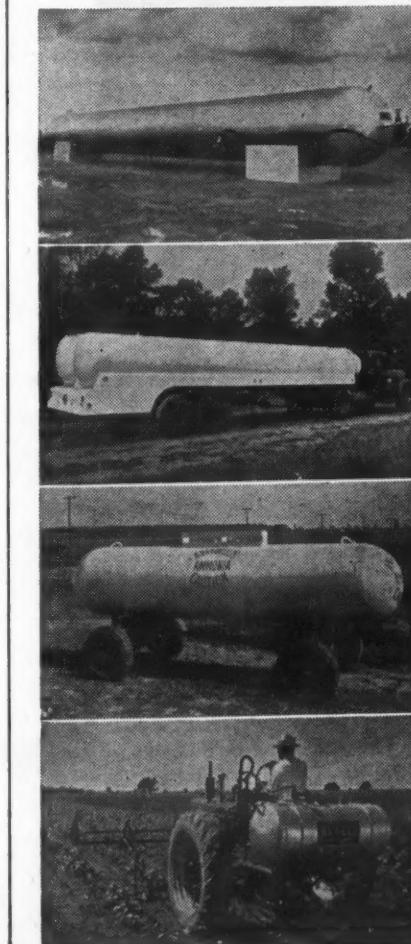
APPLICATOR TANKS—for mounting on applicator unit or tractor. Made in following sizes: 110, 150 and 200-gallon. Available unfitted or fitted with highest quality fittings. Finished in white enamel.

Let us quote you on your requirements for anhydrous ammonia equipment.

BEAIRD

THE J. B. BEAIRD COMPANY, INC.

SHREVEPORT, LOUISIANA



Better Selling

Richer Sales Fields for Dealers

CROPLIFE, Feb. 7, 1955

CROPLIFE

Iowa Farmers Expected To Boost Use of Soil Insecticides in 1955

AMES, IOWA—Iowa State College entomologists expect still more Iowa farmers to follow the practice of applying insecticides to the soil to control rootworm and other soil insects that harm corn.

The entomologists estimate that about $\frac{1}{2}$ million acres in the state received treatment in 1954.

They believe more than 350,000 acres were treated with starter fertilizer that had the insecticide incorporated with it. And perhaps half that amount received the insecticide as a direct application to the soil.

Research men at the college are continuing their tests of this prac-

tice under varying conditions around the state. Among materials they tested last year were aldrin, chlordane, dieldrin, endrin, heptachlor, toxaphene and lindane as a seed treatment.

In general, they have found that the corn on treated soil yields a little more, stands better and is easier to harvest.

SORGHUM YIELDS BOOSTED

STILLWATER, OKLA.—Trials in 1953 show that eastern Oklahoma soils need fertilizers to produce maximum sorghum yields. Average yields of Darset in two locations were 34.9 bu. per acre on plots receiving 40 lb. P₂O₅, as compared to 22.4 bu. for plots receiving no treatment. The same treatment as above plus 40 lb. K₂O produced a further increase in yields in one trial at Bokchito.

SHOP TALK

OVER THE COUNTER

FOR THE DEALER

By EMMET J. HOFFMAN
Merchandising Editor

The problems of one individual fertilizer dealer are not much different from those of his neighboring dealer. Many of these problems differ only in degree from state to state.

Whenever a dealer speaks out on these problems and gives his recommendations for correcting them he usually finds an attentive and sympathetic audience of dealers listening. It is good for the industry to have dealers do some soul-searching because it can only result in improved prestige and sales. One who has done some careful thinking about these problems is Floyd Bridger, Jr., Bridger Supply Co., Jonesboro, Ark. He was asked to express his thoughts to registrants at the Arkansas Fertilizer School at Little Rock, sponsored by the University of Arkansas and the Arkansas agricultural experiment station and agricultural extension service.

Mr. Bridger had this to say:

"I realize that the final goal that we would like to reach is to have the correct fertilizer in the correct amounts applied correctly to each crop on each farm. The manufacturers have done a good job in having the correct mixtures available and know this is due to a lot of study and work. The university and extension service have done a wonderful job in getting the soil analyzed and letting the farmer know what he has and what he needs. As I see it the final link is the dealer."

Better Training

"What we need today is good fertilizer dealers, who are qualified to make recommendations based on the university soil analysis and on the individual farms and the farmers themselves. There must be a desire created for trained men to become dealers or for the present dealers to become better trained. Now I'm not going to try to tell you what has to be done just to help me as a dealer, but what I would like more than anything else is just to see the money that the farmer spends in my county for fertilizer is spent wisely, and admit that I am not fully qualified to help him spend it wisely."

"There are no doubt many dollars wasted on fertilizer each year because the dealer took the easy way out—you know the farmer needed one mixture but he said he wanted another because that was what his daddy used and the dealer said—'What the heck, I don't make anything much on it either way and do have the kind he wants so let him have it.'

Suggestions

"Here are a few suggestions of how we could be helped to become better fertilizer dealers:

1. The university might set up regional fertilizer schools for dealers and really teach the down-to-earth features of the fertilizer business concerning recommendations, etc.
2. The manufacturer then might require each of his dealers to attend one of these schools periodically and have a certificate of some sort showing his attendance there—which might in itself make quite an impression on the farmer customer and give him a little more confidence in the dealer recommendations.
3. The manufacturer then might increase his discounts and give volume discounts to encourage added volume. Also he could establish some incentive for the

For men interested in the

ANHYDROUS AMMONIA INDUSTRY

Here's help...
FREE



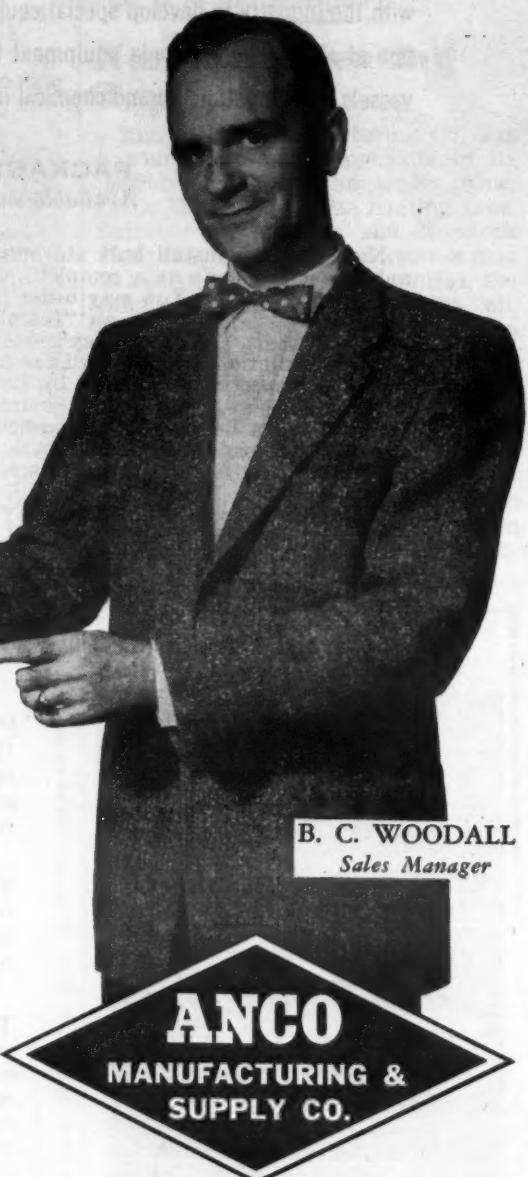
You have an idea. You want to build a bulk plant for Anhydrous Ammonia; or increase the size of your present NH₃ equipment. But you need help... skilled engineering help... help that designs you a plant for your individual requirements while complying with existing federal, state and local laws and regulations.

ANCO gives you such valuable help absolutely free! From your idea, ANCO develops actual blueprints... supplies all equipment from storage tanks to safety equipment. So start the ball rolling! Fill out the coupon below and mail it today!

Mr. B. C. Woodall, Sales Manager
Anco Manufacturing and Supply Co.
Tulsa, Oklahoma

Please send me your Bulk Plant Questionnaire for NH₃ Bulk Plants. Even though you help me develop my ideas for a plant, I understand that I am under no obligation to you.

NAME _____
ADDRESS _____
CITY _____ STATE _____



ANCO
MANUFACTURING & SUPPLY CO.

217 East Archer • Tulsa, Okla.

Complete stocks located at the
following warehouses

Omaha, Nebraska • East St. Louis, Illinois
Minneapolis, Minnesota

Better Selling

Richer Sales Fields for Dealers

dealer to help the county agent secure soil samples. You will probably say that our discounts are now as large as they can be. If so, then increase the price a little and cut the profit a little because I think with a good dealer program the manufacturer can double his fertilizer sales. Some will say that the farmer is paying too much now for his fertilizer. But I think it would be better to have a qualified fertilizer dealer making recommendations of proper fertilizer than to have a quack recommend nothing.

I am not suggesting that these things be put through as laws because as we all know we have enough laws and regulations now. But one thing is certain, and that is if manufacturers do this themselves and it doesn't work, they can always change and I'm sure that if they can help us as dealers become better qualified we will sell many more bags of fertilizer for them.

ILLINOIS DEALER

(Continued from page 9)

every year it gains more and more friends. In Illinois an increased stand of 137% has been noted in favor of arsenic treated seed. Let us read to you what several local people, Mrs. Leo Klemm of Maple Park and Lloyd Garman and Elmer Lindgren, have to say about the results from using arsenic on their grass seed on their farms in the past years . . .

Mr. Brooke has an exhibit each year at the Sycamore Mid-Winter fair, where he shows fertilizer, feed and lumber products. This fair was given a great deal of publicity in an issue of Elmer's News Letter and helped to bring in many farmers.

In one issue of Elmer's Letter there were mentions of removals, retirements and new ownerships of the area, involving more than 30 farmers. Names and places were printed in the news letter, with the following copy appended:

"We wish to welcome all the new residents to our community and are pleased that we may add them to our mailing list. We do hope that everyone will enjoy living among us, feel welcome and participate in the activities of this community and very quickly forget that they are newcomers."

"We further hope that they get 'in-the-groove' as the saying goes and read every issue of Elmer's News Letter, as it arrives each month. It sometimes saves miles of driving when looking for the unusual as well as the usual farming needs. As one lady said, 'I would have saved two days driving if I had come here first.' Don't forget, folks. Try Farmers Grain & Lumber Co. first. You'll undoubtedly find what you're looking for here—and at reasonable prices with the quality taken into consideration . . ."

In addition to advertising done through the news letter, Mr. Brooke also uses some newspaper copy. His firm, along with many other dealers, is on a manufacturers daily radio program in a nearby town with the market and weather news.

MORE SOIL TESTS

EAST LANSING, MICH. — Michigan farmers are getting more conscious about the value of soil testing. John Shickluna of Michigan State College's soil science department found that the 53 soil testing stations in the state tested 65,000 samples last year. That's compared to 30,000 in 1953 and 26,000 back in

Treadle Sprayers Show Promise In Minnesota Tests

A brief look into a fly-free future for beef cattle came from an experiment at the University of Minnesota's Rosemount Agricultural Experiment Station last summer.

A group of beef heifers were helping themselves to soothing jets of insecticide from automatic treadle sprayers—and gaining weight far better than a "control" group not given the luxury.

One group of four gained an average of 25 lb. each from June 16 to Aug. 9. Another group, not sprayed, lost a pound each during the same period.

The experiment was conducted at

the University's Beef Cattle-Grassland Farm by L. K. Cutkomp, associate professor of entomology. The treadle sprayers gave each heifer half a cc from each of two nozzles every time she came through on her way to or from a watering trough. An upper nozzle sprayed her back, a lower one her legs and flanks.

The best spray gave almost 100% elimination of horn flies. Heifers which gained 25 lb. average had only about one horn fly on each. But unsprayed animals had an average of 58 horn flies apiece.

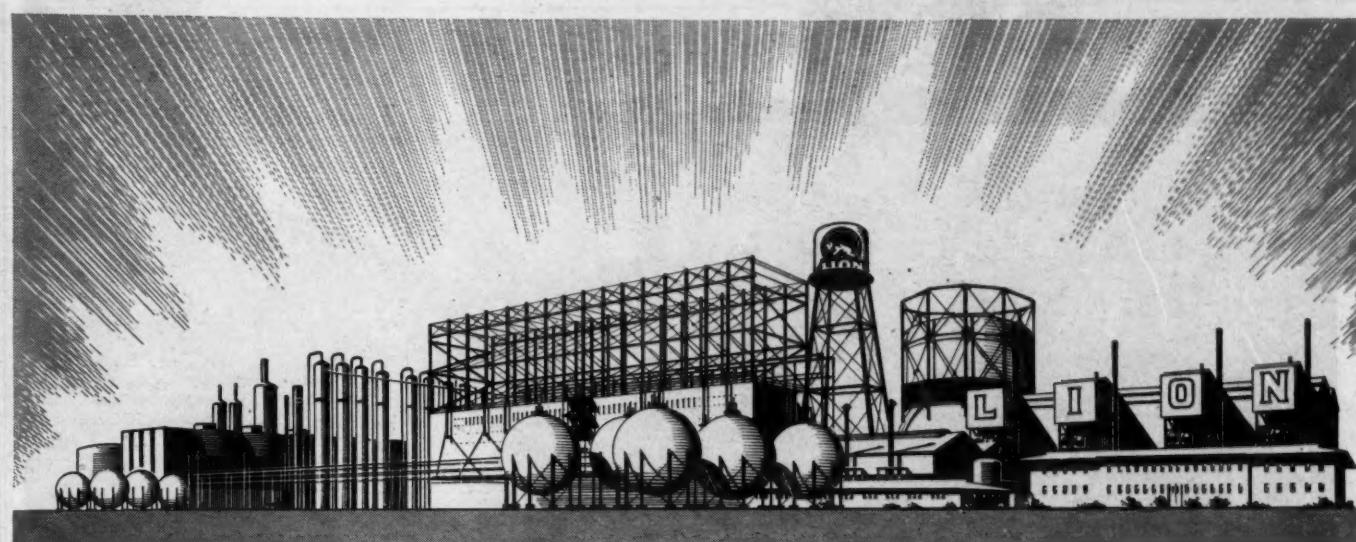
DELINTING PLANT

EL PASO, TEXAS — The Southwest Fertilizer & Chemical Co. on East Paisano Drive here recently opened a new acid delinting plant.

Indiana Fertilizer Consumption Grows

CHICAGO—Indiana farmers used 896,104 tons of fertilizer in the first six months of 1954, to boost crop yields per acre, cut costs of production and increase their profits, reports the Middle West Soil Improvement Committee, in a statement summarizing statistics compiled by F. F. Quackenbush. This was nearly 80% as much plant food as was used in the entire fiscal year of 1953.

Leading all other fertilizer ratios with 534,196 tons was the 1-4-4 ratio which includes fertilizer grades such as 3-12-12, 4-16-16 and 5-20-20. Second in rank with 147,751 tons was the 1-1-1 ratio, including fertilizer grades such as 10-10-10, 12-12-12 and 8-8-8.



How LION Helps YOU Sell NITROGEN FERTILIZERS

✓ Two Giant Chemical Plants Assure the Supply

✓ Advertising Helps Create the Demand

As a retailer, you'll find it to your advantage to sell Lion nitrogen fertilizers, because Lion's manufacturing capacity and storage facilities assure a ready supply of top-quality materials, and Lion's consistent advertising pre-sells the Lion brand.

Capacity? Lion's two giant chemical plants are now in production, making Lion a leader in manufacturing the most popular and economical types of nitrogen fertilizers not only in the South but nation-wide.

Delivery? Lion has constructed huge storage facilities to accumulate enormous stocks of the various nitrogen fertilizer materials. Even when demand is intense, you can get Lion nitrogen products.

Pre-selling? Lion's continuous advertising does an effective pre-selling job for you with your farmer customers. See list below.

Feature and sell nitrogen fertilizers with the Lion emblem on the bag, or Lion's anhydrous ammonia. You'll make sales easier, which means more profit for you.

Look To LION—A Leader In Petro-Chemicals—For Nitrogen Fertilizers

Lion Anhydrous Ammonia • Lion Ammonium Nitrate Fertilizer

Lion Aqua Ammonia • Lion Nitrogen Fertilizer Solutions

Lion Sulphate of Ammonia

DISTRICT SALES OFFICES:

NATIONAL BANK OF COMMERCE BLDG., NEW ORLEANS, LOUISIANA

SHEPHERD BUILDING, MONTGOMERY, ALABAMA

LION FERTILIZER ADVERTISING
REGULARLY APPEARS IN:
• Farm & Ranch-Southern Agriculturist
• Prairie Farmer
• Progressive Farmer
• Wallace's Farmer & Iowa Homestead
• Leading State Farm Publications

LION OIL
CHEMICAL SALES DIVISION



C O M P A N Y
EL DORADO, ARKANSAS



To make farming a better-paying business . . .

THREE YEARS before the Spaniards sank the battleship Maine in Havana harbor, the first V-C Fertilizers were supplied to American farms by a group of small manufacturers who had gotten together and formed a company based on a new idea in the production and distribution of commercial plant food.

For economy and convenience, V-C factories were to be located near the farms they served, and yet each factory was to benefit from the scientific research, skill, experience and facilities of a large organization.

In 1895, the V-C aim was to make farming a better-paying business, by supplying farmers with better fertilizers at reasonable prices through reliable, dependable dealers. V-C could prosper only if the farmers prospered.

Sixty years later, this simple aim still guides V-C policy. With its network of 34 fertilizer factories, its phosphate rock mines, its superphosphate producing units, its research laboratories and its staff of technical experts and agronomists, the V-C organization serves farmers from the Rocky Mountains to the Atlantic and from Canada to the Gulf of Mexico.

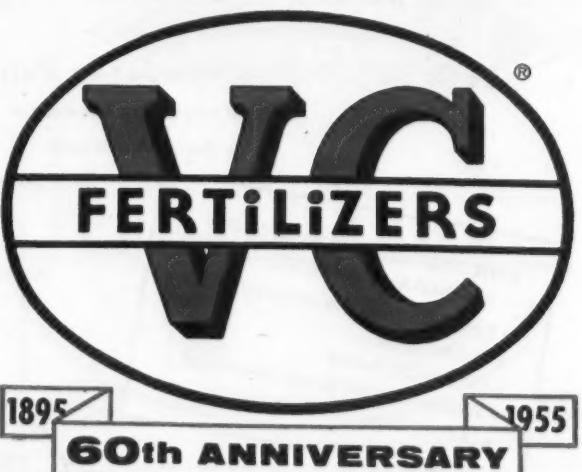
Today there is a V-C Fertilizer for every crop on every soil. Each V-C Fertilizer is a rich, mellow blend of better plant foods properly balanced to supply the needs of the crop for which it is recommended.

Through the years, V-C has constantly tested and developed new methods and new materials to bring more and more profit-making crop-producing power to the farms of increasing thousands of V-C customers. And the price of V-C Fertilizers has

remained low compared to other things the farmer buys.

Yet, fertilizer is only part of the story of V-C's partnership with the farmer and the soil. V-C has constantly striven to develop new markets for farm products. V-C uses cotton cloth and kraft paper from farm pulpwood to make millions of bags each year. V-C uses nicotine extracted from tobacco in the manufacture of insecticides, the most famous of which is Black Leaf 40®. V-C research has created a new textile fiber from corn, known as Vicara®, now found in luxurious apparel for the whole family at fine stores everywhere. V-C uses other farm products in countless ways.

In the years ahead, Virginia-Carolina Chemical Corporation will continue to rally every resource to the job of making farming a better-paying business.



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Direct Mail Builds Business For Iowa Dealer

A varied direct mail advertising program is used effectively by the Girton Farm Store, Mason City, Iowa, in selling feed, seed and fertilizer.

Glenn Harmon, manager, has a list of 350 farmers in the area and he usually sends them a mailing twice a month, on the 10th and the 25th. The reason for choosing these dates is that they do not conflict with other dates on which the farmer may get monthly bills, etc.

In fact, Mr. Harmon has used other dates in the past, but has been convinced by results that the 10th and 25th are best for his area. "Farmers have time to read our direct mail at those times," he states, "and that is important, if they are going to buy."

Mr. Harmon sometimes uses an ordinary postcard on which he mimeographs prices, and then again he will use a larger cardboard sheet which measures 4 by 9 in. Because of its size this "jumbo" type postcard gets more attention from farmers, he reports.

This firm has recently engaged in a program of visiting farmers in the trade area. Mr. Harmon reports that in previous years he could not make many calls on farmers due to pressure of business; but today's market conditions call for such outside work he believes. Sales from this kind of outside effort are very promising reports Mr. Harmon.

When it comes to credit, the firm has two prices. The cash prices are quoted, but if a man wants credit he is told that there is a 5% extra charge for carrying such an account. When the matter is put to a customer like this he usually tries to pay cash.

"I don't think a dealer will lose a good account through such a credit program," declares Mr. Harmon. "The good farmer intends to pay and can usually pay at the time he buys if he plans it that way. However, the dead beat is the fellow who will hesitate to buy when the credit charge is pointed out to him. We always ask new accounts to give us references too, as a matter of course."

Mr. Harmon and his staff like to be known as friendly folks. They do their utmost to make the farmer feel at home when he comes to the store. While they aim to give him as quick service as he wants, they are always ready to sit down and visit with him. It is not unusual to find five or six farmers visiting in the roomy office with Mr. Harmon, while the rest of the employees are busy filling orders. It is through informal gatherings like this that this firm is able to learn of individual problems and can make suggestions to solve them.

Most of the employee training at the store is done during slack periods. Mr. Harmon and his men will talk things over every day, and if customers enter, the meeting is stopped and resumed later. In this way, no night meetings for training are needed.

During the past few years the firm has conducted a fall campaign on fertilizer and has been able to sell many extra tons and get payment upon immediate delivery. They urge farmers to buy fertilizer early so that it can be properly cured by the time they wish to use it in spring. Farm to farm visits in this connection have helped to get these extra sales.

Mite Research

FORT COLLINS, COLO.—Dr. Tyler A. Woolley, associate professor of zoology at Colorado A&M, has been awarded a \$1,400 grant by the National Science Foundation, Washington, D.C., for equipment and technical assistance in investigations of Colorado beetle mites.

Good Weather Brings Farm Activity to a halt in Mid-South

MEMPHIS — Farming activity in Arkansas, Mississippi and Tennessee was brought to a standstill recently by bad weather, extension officials said in their weekly reports of farm conditions.

While the rains and icy weather kept Mid-South farmers indoors, the weather was beneficial to croplands, which still need moisture in many areas.

Freezing weather in Arkansas was helpful to farmers in killing insects, but more rains still are needed, Arkansas Extension Service officials said.

Farm groups in Arkansas are keeping a close watch on the state legislature, where two hot issues have shaped up — one a proposed water rights law and the other a proposal to set up a milk control commission to regulate milk prices.

Arkansas rice farmers voted overwhelmingly in favor of nationwide rice marketing quotas. In the state legislature, a resolution was adopted calling upon the State Plant Board to adopt stiffer regulations against the spread of pink bollworm.

In West Tennessee, Judd Brooks, district extension agent at Jackson, reported that "cold weather still is keeping rural dwellers indoors, but recent rains have been beneficial to permanent pastures and small grains.

"Cover crops and pastures are in the best shape they have been in for a very long time and many farmers are reporting heavy grazing on pastures they had thought were gone.

"For the first time in many months stock ponds are beginning to fill up," he said.

Farming activity throughout most of Mississippi has slowed to a virtual standstill because of extremely cold weather, agricultural extension service specialists said.

Arkansas Anhydrous Ammonia Group Plans Meeting

LEPANTO, ARK.—Plans for the third annual meeting of the Arkansas Anhydrous Ammonia Assn. call for sessions Feb. 7-8 in Little Rock, G. E. Davis of Lepanto, secretary, said.

Speakers for the session include Jack F. Criswell, executive vice president of the Agricultural Ammonia Institute in Memphis; Dr. R. L. Beecher, agronomist of the University of Arkansas; Bud Davis, irrigation specialist of Memphis; Woody M. Miley, extension soil specialist of the Agricultural Extension Service, and M. L. Blair, chief boiler inspector for Arkansas.

J. D. Wooten, Mid-South Chemical Co., Memphis, also will be on the program.

W. O. Melton of Trumann, Ark. is president of the Arkansas association.

Arkansas Appointments

FAYETTEVILLE, ARK. — Three new appointments in the University of Arkansas' Department of Horticulture and Forestry have been announced by Lippert S. Ellis, dean and director of the College of Agriculture and Home Economics. George A. Bradley and Ahmed A. Kattan have been named as assistant professors. Both will devote full time to research for the Agricultural Experiment Station, studying irrigation of horticultural crops as it affects plant physiology.

The third new appointee is Marion Baxter Jones of Booneville, Ark. He has been named instructor, replacing C. H. Hendershott who resigned in November to serve with the Arkansas Agricultural Mission to Panama.

CORN ALLOTMENTS

(Continued from page 1)

billion bushels in the commercial area this year.

The commercial corn-producing area for 1955 results from the addition of 5 and the removal of 34 counties from the 1954 number.

When corn acreage allotments are in effect, compliance with farm allotments is a condition of eligibility in the commercial corn-producing area for price supports. The law exempts the non-commercial corn area from allotments but provides that when corn acreage allotments are in effect, county loan and purchase agreement rates in the non-commercial area are to be 1/4 of the rates in the commercial area. Price support rates for the 1955 crop of corn will be announced before planting time.

Department officials also pointed

out that compliance with corn acreage allotments is a condition of eligibility for Agricultural Conservation Program payments in the commercial corn area.

The following is a summary by states of the preliminary apportionment of the 1955 commercial area allotment to counties and the final tabulation of county allotments by states for 1954. Final county allotments for 1955 will be determined in cooperation with state ASC committees.

CORN ALLOTMENTS

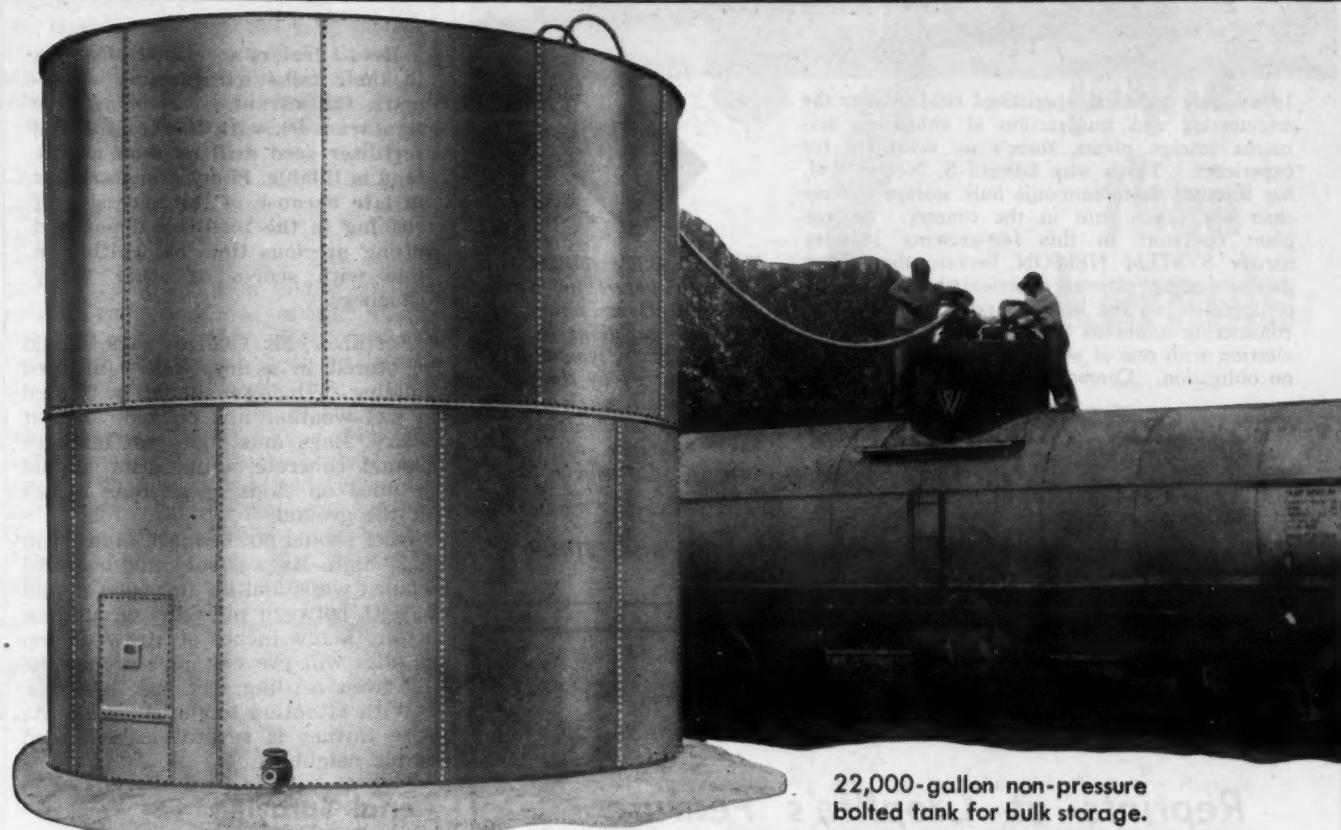
State	Commercial counties		County allotments (acres)	
	1954	1955	1954	1955
Ark.	4	0	133,820	0
Del.	3	3	136,600	151,138
Ill.	101	101	7,524,523	8,172,895
Ind.	89	89	3,823,293	4,160,233
Iowa	99	99	9,063,929	9,636,620
Kansas	23	23	1,415,054	1,574,559
Ky.	43	43	1,060,530	1,145,429
Md.	14	14	309,670	333,647
Mich.	29	29	1,048,923	1,175,522
Minn.	58	58	4,326,951	4,738,582
Mo.	74	69	3,069,695	3,281,548
Neb.	63	61	5,692,096	5,923,994
N. J.	7	7	93,253	99,366
N. C.	25	23	786,826	890,177
N. D.	1	1	89,493	96,478
Ohio	69	68	2,731,498	2,960,633
Pa.	30	30	745,304	811,956
S. D.	36	32	2,713,041	2,726,309
Tenn.	15	9	465,576	529,370
Va.	9	9	150,852	171,886
W. Va.	2	2	30,771	31,935
Wisc.	35	36	1,580,807	1,730,422
Total	834	805	46,995,504	49,842,697

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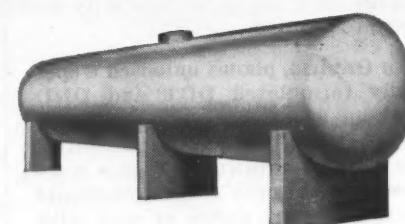
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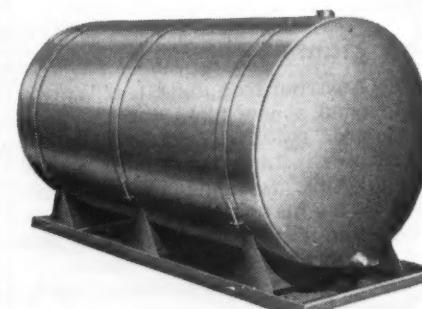


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Bug of the Week

Twenty four of the insects described in Croplife's weekly feature, "Bug of the Week," have been reprinted into an attractive 8½ x 11 inch booklet for distribution to the trade. The price is 25c each in quantities up to 100; 20c each in quantities of 100-1,000, and 15c each in quantities over 1,000. Firms may have their names imprinted on the back cover at a moderate extra charge.

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WORLD REPORT

Industry News from Everywhere

By GEORGE E. SWARBRECK
Croplife Foreign Office Manager

From countries clear around the world come reports of the drive to urge farmers to do their fertilizer shopping early.

There are many important reasons for doing this and L. M. Godfrey of Canada, a member of the agricultural department of Canadian Industries (1954) Ltd., has listed some of the reasons why farmers should get moving. Besides the early buying discounts, a farmer who buys quickly can usually depend on receiving well cured material which has less tendency to cake than the "green" fertilizer made during the spring rush.

Moreover, the farmer is more likely to get the mixture he needs, as determined by soil tests, Mr. Godfrey points out.

Retail dealers are urged to stress, in their talks with farmer customers, the advantage of being able to start work with the tractor and fertilizer seed drill as soon as the land is tillable. Many crops are put in late because of the necessity of rushing to the fertilizer depot and losing precious time by waiting in line with scores of other tardy shoppers.

Fertilizer, Mr. Godfrey says, should be stored in a dry, well ventilated building. Windows should be closed in wet weather and opened when it is dry. Bags must not rest on bare ground, concrete or metal but should be piled on skids about four inches off the ground.

Piles should not be more than seven bags high. Bags should not be piled against walls and an air space should be left between piles for circulation of air. A few inches of straw on top of piles will prevent moisture in the air from settling on bags, he adds.

With attention to these points, the wise farmer is several acres ahead of his neighbors.

Aerial Spraying

Aerial crop spraying and dusting is fast becoming one of the most popular methods of agricultural pest control in Canada. Last year more than 400,000 acres of grain land in the four western provinces were sprayed by airplane with 2,4-D for weed control. About 36,000 acres of resort areas across Canada were pelted with DDT spray for black fly and mosquito control.

In Ontario, planes unloosed a specially formulated DDT and DDD dust on 35,000 acres of the province's rich tobacco land to control the tobacco hornworm. Planes were also used to spray several thousand acres of hydro rights of way with a chemical for brush control.

In New Brunswick and Quebec 1,800,000 acres of forest were sprayed by 70 aircraft to control the budworm. This was one of the largest aerial spraying operations on the continent.

New Plants

The Austrian Iron and Steel Works has opened a new plant for the production of sulfuric acid and superphosphate at Linz. Anhydrite, found in the Alps, is being used as the starting material. Superphosphate production is expected to reach 40,000 metric tons a year in due course.

Commonwealth Fertilizers and Chemicals, Ltd., is constructing a new plant at Yarraville, Victoria, Australia with an expected yearly capacity of 30,000 tons sulfuric acid. Part of the plant is already in production and full operation is slated for the middle of the summer.

The new superphosphate plant for The Albany Superphosphate Co., Pty. Ltd., in west Australia, erected at a cost of nearly \$3 million is now operational. The plant is designed to produce 60,000 tons a year, the immediate requirement of the area, but as the demand increases, the facilities will be expanded, states M. A. Cumming, chairman.

U.K. Also

Three new plants for the production of sulfuric acid from anhydrite have been erected in the U.K. and one is already operating with the others scheduled for an early start.

Most of Britain's sulfuric acid is made from elemental sulfur or sulfur bearing pyrites, both of which must be imported. Until the sulfur famine, which coincided with the Korean war, but little was produced from anhydrite, found in Britain in large quantities.

Britain's first and only plant producing from anhydrites was laid down at Billingham in 1929 by Imperial Chemical Industries, Ltd. This has now been extended at a cost of \$5.6 million and will provide extra capacity of 70,000 tons a year to give a total potential output of 180,000 tons.

Another plant at Widnes, built by the United Sulphuric Acid Corp., a company sponsored by 11 major consumers of acid, is costing \$14 million and will have a capacity of 148,000 tons a year. Operations are expected to start in April.

The third plant, that of Solway Chemicals at Whitehaven, with an annual capacity of 90,000 tons, will be ready in the fall.

When the three plants are in full operation anhydrite acid production this year will be hiked from 100,000 tons reported last year to 270,000 tons, a figure which represents 12½% of total British production. In a full year the total will be 400,000 tons or 20% of total acid output.

Disadvantage

Critics have pointed out that the original decision to extend Britain's anhydrite capacity was undoubtedly justified when sulfur was critically scarce and expensive, and prospects for larger supplies appeared dim. With the improvement in supplies during the past two years, the economic advantages of the new plants appear questionable.

It is again cheaper to make acid from elemental sulfur than from either pyrites or anhydrites, observers state.

The Sulfur Exploration Syndicate, commenting on this point of view, states that the increased use of anhydrite can be justified, however, not only because it reduces dependence on imported acid making materials but because it permits the production of cheaper acid than pyrites, which currently accounts for the largest item in Britain's sulfur import costs.

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IOWA AMMONIA DISTRIBUTORS MEET—Nearly 100 persons attended a recent meeting of the Iowa Agricultural Ammonia Distributors, held in Des Moines. Seventy two anhydrous distributors, who own or control more than 200 bulk storage plants, now are members of the organization. At the meeting an extensive advertising program was planned for the coming season. Shown above are officers who were present at the session. Front row, from left to right, are James H. Andrew, Andrew Farm Store, Jefferson, secretary treasurer; B. A. Frankl, Mor-Gro, Inc., Algona, president, and Joe Rowland, Jr., Schrock Fertilizer Service, Morton, Ill., first vice president. Back row, from left to right, are Marshall McArthur, Jr., McArthur Chemical Co., Eldridge, director; W. E. Birdsall, Davidson Gas & Electric, Osage, second vice president; Al Kliewer, who represented Tully Talbot, Chemco, Audubon, director; Jerry Jirovsky, Farmers Hi-Yield Fertilizer, Blencoe, third vice president, and Barton Bonzer, Ag Service Co., Charles City, director. Not present was C. E. Lakin, Lakin Implement Co., Emerson, a director.

Monsanto Plant Cited For Safety Record

ST. LOUIS — Employees of the Camden, N.J., plant of Monsanto Chemical Co.'s Inorganic Chemicals Division were honored in special dinner ceremony at Camden Jan. 29 for their all-time company safety record of more than 10 consecutive years without a major injury.

The 10-year mark, passed by the plant Jan. 8, was commemorated with a special executive committee plaque which Felix N. Williams, Monsanto's

vice president, manufacturing, presented to William J. Colvin, plant manager, for the plant's permanent possession. In addition to the plaque award, each employee of the plant received a choice of an electric clock-radio, an electric clock or an automatic coffee percolator.

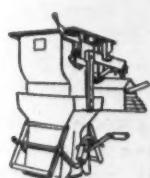
As part of the observance, the plant was awarded a Ten-Year Perfect Safety plaque by Liberty Mutual Insurance Co. and a certificate of commendation from the National Safety Council for 959,760 man-hours worked from Jan. 8, 1945, through 1954 without a major injury.

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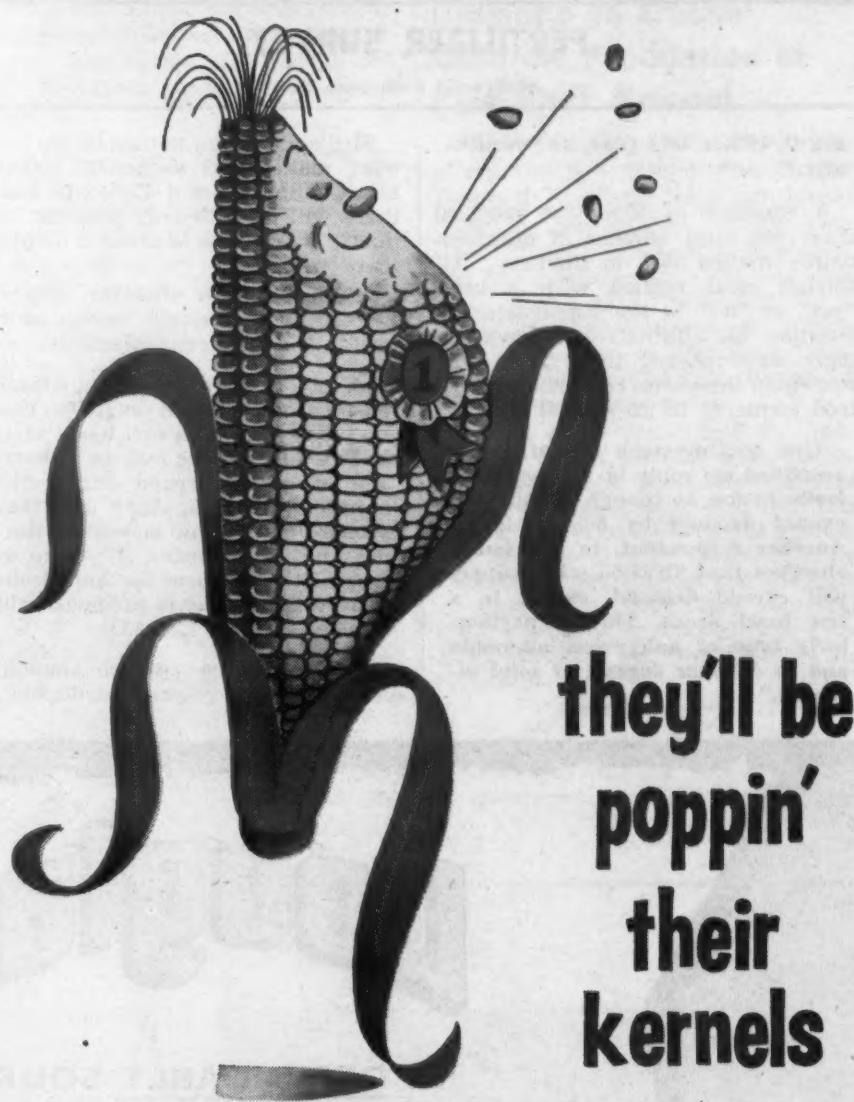
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FERTILIZER SURVEY

(Continued from page 1)

ing it, either this year, or "eventually."

A response of 30% was received from the total number of questionnaires mailed out in January. Although most replied with a brief "yes" or "no" to the supply-demand question, the affirmatives overwhelmingly outnumbered the "nays" who suspected there won't be enough plant food elements to go around.

One southwestern manufacturer amplified his reply in this way: "It looks to me as though supply will exceed demand by 5% to 10%." Another respondent, in the south, observes that "Nation wide, supply will exceed demand, except in a few local areas. This is particularly true of anhydrous ammonia and to a lesser degree, of solid nitrogen."

Still another tradesman in the midwest makes this sagacious remark about supply: "On a 12-month basis, there will be no supply problem, but if they want it all in about 3 months, there will be."

A southeastern observer sees no shortages of materials "except in the west." No further explanation.

A spokesman representing a large eastern firm which supplies raw materials to the trade, looks at it in this way. "There may be a shortage of solid nitrogen during the months of March, April and May because of the slow movement during the fall months. If there is ample storage room for anhydrous ammonia, all that is produced will be used by July 1, 1955."

Speaking for a southern ammonia distributor, one respondent doubts if

the demand will equal the supply, "especially on nitrogen which will apparently be in surplus," he says.

Another southern spokesman in a neighboring community looks at it differently, stating that demand will be up to the supply, "except for the peak periods when some shortages are to be expected."

A revision of production plans for 1955 has been planned by many firms throughout the country, according to the questionnaire returns. Even so, most companies plan on keeping their manufacturing facilities operating at "full capacity."

One midwestern manufacturer says "We expect to keep our plants operating during February, March and April, but have not done so from July, 1954 to January, 1955." His counterpart in another city of the corn belt indicates that "We hope to keep our plant running."

The contrary is stated by a southwestern manufacturer who doubts if

he can keep his facilities operating all the time. He adds, however, that they will have supplies, just the same. Agreeing with him is a far western respondent who expects his production to be off perhaps 2% to 3%.

One company which operates on a wide scale, says it expects to maintain production throughout the year "except in the south." A flat "no" is the reply of a west coast firm to the question of keeping its manufacturing facilities going at full capacity.

Most answers however, merely say "yes." These included some large concerns with multiple facilities as well as smaller firms serving only local areas.

The question of fall fertilization brought out the heaviest burst of comment. Our question was put like this: "There has been a considerable amount of effort made to promote fall fertilization. Have these programs been successful in your locality?"

Replies seemed to run in all directions. An unqualified "yes" or "no" appeared to suffice in many answers, with the greater number being on the negative side. However, there were a number of interesting comments made by quite a number of our respondents. One located in Missouri, said there had been "moderate" success in his area, "but the trend seems to be established. It needs more push by more people . . . especially by the colleges." Another manufacturer in Kentucky observes that there has been progress "to some extent, but not enough."

An eastern spokesman calls the fall fertilization program a "forward step in the fertilizer industry to promote the use of more plant food which farmers can use at a profit. It will also balance out operating programs which will lower the cost of plant food to the user." Another fertilizer man on the eastern seaboard reported "progress" being made in this direction in his area.

Still another, also in the east, observes that "gains are being made but it requires annual effort to prove the merit of fall application."

Two observers in the same southern state see things a little differently when it comes to fall fertilization. One says that there has been no success in his area during the past two years because of drought conditions. The other declares that "The reaction has been spotty, but hard educational work has produced some results."

By far the most explicit reply to this question came from a prominent midwestern manufacturer whose comments were contained in a separate letter sent back with our questionnaire. He said that "In Kansas this fall they had a good season, as they also did in Missouri. I am told that in both of these states the chief reason they had good fall business was the number of counties which were classified as drought counties by the government and the paying for fertilizer by the government."

"I am sure figures will show that there was less mixed fertilizer and less straight goods used in both Iowa and Nebraska during the fall of 1954 than there was during the fall of 1953. We also are doing less business in January than we did a year ago. Our experience, we are sure, is no different than the experience of other companies doing business in this area. It is quite obvious that the fertilizer business is becoming more seasonal, mainly due to the fact that the day of shortages are over."

"It looks to me as though these companies who have come in business during the last ten years, as in our case, are going to have to get ready to do a bigger portion of their business during February, March and April, due to the fact that neither

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dealers nor farmers apparently will take any large amount of material at other times of the year. This is going to work an extreme hardship on the fertilizer manufacturers with small storage and lack of financing to build storage and to carry the storage.

"I am predicting that there will be less fertilizer used in Nebraska and Iowa during the 1954-55 fertilizer year than during the 1953-54 fertilizer year. The farmers do not have the money to buy fertilizer ahead of time and they are not showing any eagerness at this time, to make commitments for this spring.

"If the farmers want as much fertilizer or more fertilizer this spring in this particular area, than they got last year, it is my opinion that they will not be able to get same because of lack of storage on the farm, in dealers' warehouses and in the fertilizer plants themselves. Some plants are filled, as we are, but lots of them, or at least a good many of the little ones, wait until they see the orders coming in before they start to produce.

"For eight years now, we have had all of the orders in our hands that we can take care of for the rest of the season, by about the first to the middle of December. This year, however, we are still a long way from being filled up for what we can ship during the spring season."

One question indicated a particularly interesting line of thought in its replies. We asked: "If you do not now handle anhydrous ammonia or fertilizer solutions, do you expect to add this line this year or eventually?" One answer from a fertilizer man in the northwest, said "I doubt if it will amount to much in this area," but most of those not now handling this type of plant food said they do intend to take it on sometime.

Of these, some 14% indicated that they may begin to handle solutions or NH₃, this year, while nearly 25% said they expected to make the move eventually. Some of the latter did appear doubtful, however, by inserting question marks after their reply. These were interpreted as representing a "let's just wait and see" attitude.

The final question dealt with education of dealers. "Do dealers in your area need more information on fertilizer terminology and sales helps?" we asked. Replies were interesting. "There is plenty of this information available to them, but most do not absorb it," one manufacturer declares.

Another manufacturer in an eastern state takes a more charitable attitude toward dealers. He says, "We supply any such information as is requested or needed through our office and our salesmen and most of our dealers are fairly well abreast with the situation. If there are any new developments, they contact our office or our agronomists or salesmen who have this situation well in hand. However, there is always room for improvement in so vast a field of knowledge and we are sure that Croplife is of considerable aid in meeting this situation."

A Texas concern comments as follows: "The dealers need lots of help and as far as Texas is concerned, we have an infant organization that we hope some day will aid and help the dealer in both sales and terminology."

From a prominent firm in Missouri comes the comment that "Dealers need help. They are the number one problem in fertilizer sales. No one has yet come up with any sure-fire ideas. I think mixers must bolster up dealer effort by direct education of the good farmers in the dealer's area

with their own sales force in the off-season."

A southern midwest manufacturer declares that the most important thing dealers can do "is to get farmers to take at least part of their fertilizer early. The total tonnage in this area may be off, but there will be a big problem to get 90% of the spring tonnage shipped from March first to May 15th."

Good common sense is seen in the words of a southeastern manufacturer who says that "Land grant colleges and experiment stations and county agents should give more attention to educating dealers on the increased profits to be made through promoting an adequate fertilizing program to bring about increased prosperity on farms in their community. This also applies to fertilizer companies and to farm papers."

From the deep south comes this outline of functions a dealer should be taught to perform: "Dealers should have at hand the fertilizer recommendations for their sales areas, on correct grades, rates and timing of application of mixed fertilizers. They should understand NPK and the minor elements. They should know the

value of soil testing and help farmers to collect samples and send them in to soil laboratories. Not enough soil tests are being made in our state," he says.

A west coast observer puts it bluntly in this way: "The need is for more information on local conditions. Too much generalization is being made on all fertilizer usage." His counterpart, also on the California coast, observes the dealer as "needing help in learning how to demonstrate the economics of fertilizer . . . how best to picture to the farmer the results in terms of net profit, return on dollar invested and cost of unit of production."

So here you have the Croplife fertilizer roundup story for 1955. Its results are not particularly conclusive, but they do point up interesting thinking in the industry and indicate that progress is being made on many fronts.

STRAWBERRY MARKET

NICHOLASVILLE, KY.—A firm has agreed to erect a processing plant for strawberries here, providing 300 acres of land in the surrounding counties are set aside for the crop.

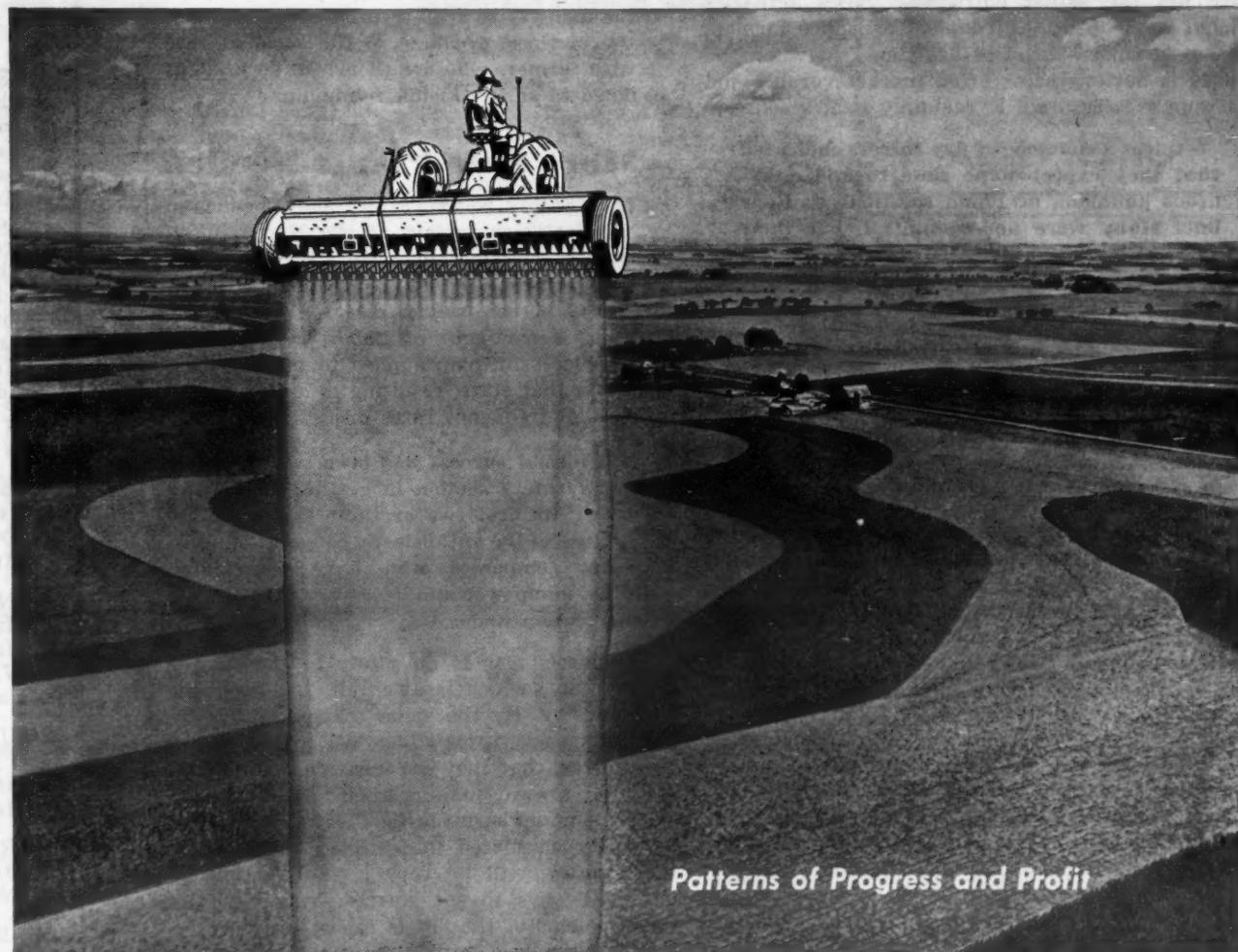
Diamond to Cease Chlorine Production at Pine Bluff Arsenal

PINE BLUFF, ARK.—Production of chlorine and caustic soda by the Diamond Alkali Co. at a site leased from the government at the Pine Bluff Arsenal will end in February, and the company will transfer this multi-million-dollar operation to a newly purchased plant at Muscle Shoals, Ala., and an existing installation at Houston, Texas, officials of the firm have announced.

At the same time Lloyd R. Costers, manager of the Pine Bluff Chemical Co., which purchases chlorine from Diamond Alkali, said his firm may take up the lease on the arsenal site in order to enter direct chlorine production, but that he will continue to purchase chlorine from Diamond until a decision is reached. The Pine Bluff Chemical Co. manufactures insecticides.

NEW MEXICO SHIPMENTS

STATE COLLEGE, N.M.—Fertilizer shipments into New Mexico from Oct. 1 to Dec. 31, 1954, totaled 4,214 tons.



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Fertilizer Mixers Speak

The way many leaders in the fertilizer field look at the general situation for 1955 is seen in the results of a questionnaire sent out to the trade by Croplife recently. A report of these observations appears on page one of this issue.

In the opinion of many fertilizer manufacturers, the fall fertilization program is making some headway, although progress thus far is negligible in comparison with the overall job to be done. This ties in with the acute storage and shipping problems faced by the industry each season when about 90% of the year's output is expected to be shipped out in three months.

Hope is expressed that eventually something can be done to spread the distribution load over a longer period of time, to the benefit of all concerned in the transaction.

Much stress was laid on the subject of dealer education, with many manufacturers stating that here lies the actual bottleneck. Sales activities should be stepped up by dealers to induce farmers to buy fertilizer ahead of use time . . . when the choice is better, prices often more favorable and the supply is assured. It certainly makes sense.

Quite a number of dry mixers indicated that they expect some time to add anhydrous ammonia or liquid solutions to their line. Many were non-committal, but their answers certainly indicated that a considerable amount of thought was being brought to bear on the problem.

Well, we didn't intend to tell the whole story here. We merely wished to point up some of the highlights of the report which you will want to read in its entirety!

Keep on With Education

The problem of educating users of various chemical products as pesticides or fertilizers is a continuing one. While a great deal has been done already in this direction, we can't afford to assume that the goal has been accomplished. The pesticide industry needs to keep alert and sensitive to the importance of giving users the facts about different products.

This was the thought expressed by an industry representative at the recent Southern Weed Conference at St. Petersburg, Fla. Eugene D. Witman, Columbia-Southern Chemical Corp., declared in his talk that "The fundamental need for better weed control in cotton is simply to provide more factual information on chemical use to the farmer."

Dr. Witman's talk elaborated somewhat on this topic, as follows: "To date only a trickle of factual information on chemical weed control has reached the farmer from state and federal authorities. Farmers are afraid to use chemical controls because of reports of injury, expensive specialized equipment needed, element of chance on retreatments of soil and cost factors which are based on rumors and hearsay.

"Many farmers and bankers are loath to investigate chemical weed control and dismiss great savings merely because such 'new fangled' ideas have not been interpreted to them in a simple, factual way," he said.

"This basic problem can be met," Dr. Witman reported on the basis of a survey conducted by his company, "with factual publications issued by state and industry groups giving accurate details of why weed control chemicals should be used, how they should be used and, in precise terms, what results may be expected. Based on the experience of the last few years in both re-

search and field trials," he told the weed conference, "we certainly have enough information to give the farmer proper guidance."

The necessary information should include, according to Dr. Witman, details on the chances of injury to crop—"facts, not blanket statements which leave an alibi for the author." Accurate tables of cost comparison with other methods and information on early and late planting dates along with the time needed to use chemicals and details on equipment needed, where it can be procured and what the cost factors are should be provided for the farmer, he said.

This is in no way critical of the work so far accomplished, but we do well in keeping ourselves reminded of the continuing effort that must be put forth to accomplish the ends desired.

A certain amount of education is attainable through publicity means. We know very well how much adverse publicity attends any kind of unfortunate accident involving chemicals. One of the needful things is for the industry to keep trying to preach proper use of these products so the accident rate with farmers who use them will be brought down to an irreducible minimum.

More Safe Plants Needed

The "Safety News Letter," published monthly by the fertilizer section of the National Safety Council, is carrying currently a series of articles on safety in small plants. This series, prepared by W. C. Creel, safety director of the North Carolina Department of Labor, is based on the highly successful plan applied to the fertilizer industry in that state, resulting in a 40% reduction in accident frequency rates in just 18 months.

Unusual success has been with the fertilizer safety section in getting under way during its first two or three years, mainly because of the enthusiastic cooperation of so many companies who have contributed ideas, manpower and necessary funds to get the section under way.

Emphasis now is on safety in the small fertilizer plant, which is after all, the backbone of the industry. By the same token, it is desirable for all concerned, including the smaller operators themselves, that they see what can be done, individually, toward making their plants safer.

The current series in the "News Letter," which is widely circulated in fertilizer plants all over the country, will be very helpful in suggesting practical ways to get started. Mr. Creel knows the problems of the "little fellow" and has had a lot of experience with plants in his state which consumes more fertilizer than any other in the nation.

We hope that 1955 will find more and more of these "little fellows" joining the fertilizer safety movement. There is much to be gained in such a move from standpoints both financial and humanitarian. In the former category, insurance companies are willing to readjust premium rates for industries where the over-all accident and fire record is favorable. But to attain such on a national scale requires a larger percentage of total plants than now belong to the formal safety group. That's one big reason why it is to the interest of all concerned, to join the crusade for safety.

The humanitarian side is too obvious to dwell upon. Better morale in a plant is one important by-product, plus the likelihood of attracting a higher type of workman to a plant where the safety reputation is good.

Whatever set of figures is used to tally up the benefits of safety, they all add up to an overwhelmingly favorable total.



CROPLIFE is a controlled circulation journal mailed to those responsible for the production and distribution of fertilizer and other farm chemicals and to retail dealers of the agricultural chemical industry in the U.S. To those not on the controlled list, CROPLIFE is available at \$5 for one year, \$9 for two years (\$8 a year outside the U.S. and possessions). Single copy price, 25¢.

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Feb. 7-8—Seventh Annual Colorado Sprayers & Dusters Conference, Student Union, Colorado A & M Campus, Fort Collins, Colo., Leslie B. Daniels, Secretary, Colorado Aerial Sprayers & Dusters Assn., Fort Collins.

Feb. 7-9—Pest Control Conference, Oklahoma A & M College, Stillwater, Okla.

Feb. 7-9—Association of Southern Agricultural Workers, 52nd annual meeting, Louisville; B. B. Jones, P. O. Box 1460, New Orleans, secretary-treasurer.

Feb. 2-3—Agricultural Chemicals Conference, Texas Technological College, Lubbock, Texas.

Feb. 8-11—Fertilizer-Seed Dealer Meetings, University of Tennessee: Feb. 8, Andrew Jackson Hotel, Nashville; Feb. 9, City Hall, Jackson; Feb. 11, McCord Hall, University of Tennessee Farm, Knoxville.

Feb. 10-11—Third Annual Oregon Fertilizer Conference, Oregon State College, Corvallis, Ore.

Feb. 10-11—Crop and Soil Conference, Oklahoma A. & M., Stillwater, Okla.

Feb. 11—New York Section, American Chemical Society, Symposium of Agricultural Chemical Development, Carbide and Carbon Bldg., New York.

Feb. 14-16—Centennial Symposium, Nutrition of Plants, Animals, Man, Michigan State College, East Lansing, Mich.

Feb. 15-16—Fourth Annual Pesticide Chemicals School, Clemson College, Clemson, S.C. Direct Correspondence to Dr. J. H. Cochran, Clemson Dept. of Entomology & Zoology, or to Dr. G. M. Armstrong, Clemson Dept. of Botany & Bacteriology.

Feb. 17-18—Middle West Soil Improvement Committee, Annual Meeting with Agronomists, Palmer House, Chicago, Z. H. Beers, 121 W. Wacker Drive, Chicago 1, Ill., Executive Secretary.

Feb. 23-25—Tenth Annual Meeting of Midwestern Chapter, National

Shade Tree Conference, Chase Hotel, St. Louis, N. B. Wyson, Cook County Forest Preserve, 536 N. Harlem Ave., River Forest, Ill., secretary-treasurer.

Feb. 23-25—Fourth Annual Ohio-Indiana Agricultural Aviation Conference, Union Bldg., Purdue University, Lafayette, Ind.

Feb. 28-March 1—Fertilizer Section, Southern Safety Conference, Jung Hotel, New Orleans, Curtis A. Cox, Virginia-Carolina Chemical Co., Richmond, Va., Chairman.

March 7-9—National Agricultural Chemicals Assn., Spring Meeting, Chase and Park Plaza hotels, St. Louis. Lea S. Hitchner, Associations Bldg., 1145 19th St. N.W., Washington, D.C., Executive Secretary.

March 8-9—Western Cotton Production Conference, Hotel Westward Ho, Phoenix, Ariz.; National Cotton Council, P.O. Box 18, Memphis 1, Tenn.

March 22-24—National Farm Chemical Council, Inc., Annual Conference, Deshler-Hilton Hotel, Columbus, Ohio; John W. Ticknor, NFCC, 350 Fifth Ave., New York, conference chairman.

March 24-25—North Central States Branch, Entomological Society of America, East Lansing, Mich.

April 26—Third Annual California Fertilizer Conference, sponsored by the Soil Committee, California Fertilizer Assn., University of California, College of Agriculture, Davis, Cal., Sidney H. Bierly, Executive Secretary, CFA, 475 Huntington Drive, San Marino, Cal.

May 19—Fertilizer Section, 25th Annual North Carolina Safety Conference, Robert E. Lee Hotel, Winston-Salem, N.C.; William C. Creel, Safety Director, Department of Labor, State of North Carolina, Raleigh, Chairman.

June 3—Fertilizer Section, Virginia State Safety Association, Jefferson Hotel, Richmond, Va.; William C. Richardson Southern States Cooperative, Richmond, Chairman.

June 12-15—Joint meeting, American Plant Food Council, Inc. and National Fertilizer Association, Greenbrier Hotel, White Sulphur Springs, W.Va. Paul T. Truit, American Plant Food Council, 910 17th St. N.W., Washington, D.C., in charge of registration.

June 28-30—Sixth Annual Pacific Northwest Plant Food Assn. Regional Fertilizer Conference, Boise Hotel, Boise, Idaho, Leon S. Jackson, 702 Lewis Bldg., Portland, Ore., secretary.

Aug. 15-19—American Society of Agronomy and Soil Science Society of America, University of California, Davis Campus.

Sept. 7-9—Ninth Annual Beltwide Cotton Mechanization Conference, Texas A&M College, National Cotton Council of America, Box 18, Memphis 1, Tenn.

Oct. 17-18—Fertilizer Section, National Safety Congress, LaSalle Hotel, Chicago, Thomas J. Clarke, Chairman.

Nov. 2-3—Annual Convention, Pacific Northwest Plant Food Assn., Pilot Butte Inn, Bend Ore., Leon S. Jackson, 702 Lewis Bldg., Portland, Ore., Secretary.

Dec. 5-7—Agricultural Ammonia Institute, Kansas City; Jack F. Criswell, Executive Vice President, Claridge Hotel, Memphis, Tenn.

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